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WORKS

OF

John Fothergill, M. D.

MEMBER OF THE ROYAL COLLEGE OF PHYSICIANS,
AND FELLOW OF THE ROYAL SOCIETY,
OF LONDON;

AND OF THE ROYAL COLLEGE OF PHYSICIANS
IN EDINBURGH;

AND CORRESPONDING MEMBER OF THE ROYAL
MEDICAL SOCIETY OF PARIS.

By JOHN COAKLEY LETTSOM.

Ιητρὸς γαρ ἀνηρ πολλῶν ἀντάξιος ἄλλων.
HOM. Iliad, xj. 514.

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CUI SUAS ARTES, SUA DONA LÆTUS
ET HERBAM ET VENÆ SALIENTIS ICTUM
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Lately published by Dr. LETTSOM; *and sold by* C. DILLY, *in the Poultry.*

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XI. An Anſwer to Baron Dimſdale's Review of Dr. Lettſom's Obſervations on the Baron's Remarks reſpecting a Letter upon GENERAL INOCULATION. Octavo, 1779. Price 6d.

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The following Performance, on the intereſting Subject of General Inoculation, has lately been publiſhed.

A Letter to J. C. Lettſom, M. D. occaſioned by Baron Dimſdale's Remarks on Dr. Lettſom's Letter to Sir Robert Barker, and George Stacpoole, Eſq; upon GENERAL INOCULATION. Octavo, 1779. Price 1s.

A Few years ago some Phyſicians in London agreed to meet together for their mutual improvement in the practice of their profeſſion. The reigning diſeaſes of the ſeaſon, with the methods of cure that were found moſt effectual; and new diſcoveries in phyſic, either here or abroad, more eſpecially ſuch as they themſelves had either made or examined, were intended to be the principal topics of converſation.*

The perſons who formed this ſociety, were either ſuch as had the care of hoſpitals, or were otherwiſe in ſome degree of repute in their profeſſion; and conſequently had frequent opportunities of making obſervations themſelves, and of verifying, in the courſe of their practice, the diſcoveries of others. When difficult caſes occurred to any of them, the reſt were conſulted, and that method of cure, which appeared moſt likely to be attended with ſucceſs, was tried, and the event communicated.

When theſe meetings had continued a conſiderable time, ſome of the members became deſirous of making the public partakers of the advantages that might be derived from ſuch an aſſociation: accordingly they, with ſome other Phyſicians, formed themſelves into a ſociety, for collecting and publiſhing Medical Obſervations *and* Enquiries.---Preface to the Medical Obſerv. &c. Vol. I.

Dr. Fothergill, if not the firſt projector of this important publication, has certainly been a very conſiderable contributor to it, as the many uſeful papers of his, extracted from it, will abundantly teſtify. Editor.

* *The Society's firſt volume was publiſhed in* 1758.

OF THE

USE of the CORTEX PERUVIANUS, IN SCROFULOUS DISORDERS*.

AS I do not remember to have met with many inſtances recorded of the effects of the Bark in Scrofulous Diſorders, I take the liberty to offer the following obſervations on this ſubject to the Society, and ſubmit them entirely to their correction and diſpoſal.

About the year 1744, a poor woman brought her child, a boy between twelve and fourteen months old, and requeſted my aſſiſtance for a diſorder in its eyes, that ſeemed to threaten total blindneſs. The eyelids were ſo ſwelled, and ſo exquiſitely tender, that it was with difficulty I obtained the ſlighteſt view of one eye, the coats whereof ſeemed only to be affected: the lips were likewiſe much ſwelled; the glands about

* From the Medical Obſervations and Enquiries, vol. i. p. 303. Read November 29, 1756.

the neck enlarged; and the whole aſpect denoted a ſcrofulous tendency.

I ordered a ſpoonful of a decoction of the Bark to be given three times a day, adding to each doſe from ſix to ten drops of the *balſ. polychreſt.* or ſo many as might be ſufficient to procure a laxative ſtool every day, the child being naturally of a coſtive habit.

The child was ordered to live upon light broth, and ſuch tender animal food as the poor woman could procure; and to be kept from much fruit and vegetables.

By this method, in about a fortnight, he was able to bear the light; and, in a month, I had the ſatisfaction to ſee him perfectly recovered.

The ſucceſs of this experiment induced me to repeat it as occaſion offered. Not long after, a boy was brought to me, about ſeven years old, of a thin ſpare habit, pale ſickly look, with the eyelids ſo much ſwelled, and the eyes ſo tender, as to be incapable of bearing the leaſt glimmering of light; and his face was here and three cruſted with moiſt ſcabs, which had almoſt covered his chin.

I ordered a decoction of the Bark to be given, to the quantity of a ſpoonful and a half, three times a day; and a ſmall pill, with one grain of calomel in a little conſerve of roſes, every other night.

This proceſs was continued about ten days, when he was brought to me again: the eyes were leſs tender, and his face was ſomewhat cleared

cleared of the ſcabs: but as the ſeaſon was then growing colder, the decoction was continued alone about a month, when the child had recovered better health than he had enjoyed during the preceding year: he could bear any light without pain, the ſcabs had diſappeared, and the glands were become ſmall and ſofter.

The ſpring following, his eyes again growing tender and painful, and other ſymptoms appearing of his former indiſpoſition, the ſame remedies were repeated, and produced the ſame effects as before; and that he might be ſecured from the like returns for the future, I adviſed that he ſhould take the decoction and pills for ten days or a fortnight, once in three months, for about a year. This advice was punctually complied with, and he remained free from any ſymptom of the diſorder about four years, from the laſt repetition of the medicines, when he was ſeized with the confluent ſmall-pox, at that time very rife and fatal, and died of the ſecond fever.

In the year 1750, a poor woman brought her child, ſomewhat more than a year old, affected with a very painful ſcrofulous ophthalmy, to Dr. Clephane and me, then at Scarborough. A method like the former was directed, and we had the ſatisfaction to find, ere we left the place, that the child had reaped from it all the benefit we could wiſh.

A young gentleman, about ſeventeen, of a thin habit, in an employment that admitted but

of little exerciſe, accuſtomed to a plentiful table, and deriving from his parents a ſcrofulous taint, deſired my aſſiſtance for a large indurated parotid.

I directed a two-ounce draught of the decoction of the Bark, with about forty drops of the *tinct. guaiac. volatilis* to be taken twice a day, and to be continued during two months.

By the uſe of this remedy he grew ſtrong and more florid: the tumour did not increaſe, but felt ſomewhat ſofter than at firſt. Having thus ſtopped its progreſs, I adviſed him to deſiſt about two months, and then to repeat the ſame remedy: but no conſiderable benefit accrued from this ſecond courſe; the tumour, though leſs than at firſt, was ſtill obſervable.

Things remained in this ſituation about a year, when his chin and upper lip began to be covered with a thick yellow ſcab, moiſt and itching. This was both troubleſome and diſagreeable. I had recourſe again to the Bark in various forms, but without the advantage I hoped for: it ſeemed to ſtop the progreſs of the diſtemper, but did not cure it. A courſe of *calomel* and *ſulphur aurat. antimon.* in ſmall doſes, *viz.* a grain of each every night, gradually cleared his face of this diſagreeable gueſt; but it ſoon broke out again. Bathing in the ſea, and the uſe of Scarborough water upon the ſpot, at length extirpated this cutaneous diſorder. The parotid however ſtill continued ſwelled; but

but as he now began to acquire a more manly habit, it ceaſed to be conſpicuous.

In this caſe I had juſt reaſon to apprehend that the Bark put a ſtop to the tumour's increaſe, and rather ſoftened it; but this was all: and I have met with many other caſes, in which the Bark has had the like effects; checked the ſpeedy progreſs of the diſeaſe, reſtored a better ſtate of health in various reſpects, and laid a proper foundation to proceed upon, in attempting a cure by other methods. I have likewiſe made uſe of the Bark in ſcrofulous ulcers, but hitherto not with the ſucceſs one might expect.

I have at preſent under my care a boy about fourteen, a girl about ten years of age, and a third about ſeven of a very delicate habit. The two firſt are poor, and a charge to their parents, from a ſoreneſs in their eyes, that renders them incapable of bearing the light, or doing any thing towards their ſupport. The laſt is obliged to live in conſtant darkneſs, though the child of perſons in better condition. They have been in the courſe deſcribed above ſeveral weeks, and are daily recovering.

Sometimes I give the *calomel* pills above mentioned with the decoction, eſpecially if any ſymptoms of the worms appear, or if the caſe is attended with coſtiveneſs, and a diſcharge of acrimonious moiſture on any part of the ſkin. But the Bark is the remedy I think chiefly to be depended on; and the doſe ſhould be as much as the patient can be prevailed upon to

take; providing with equal care againſt coſtiveneſs and its oppoſite.

As I imagine the reſult of repeated obſervations will be more agreeable to your plan than a detail of particular caſes, I ſhall conclude this narrative with remarking, that I have given the Bark, in caſes ſimilar to thoſe above deſcribed, to children of different ages, to adults of both ſexes, and in various conditions of life; and have found, that it may not only be given with great ſafety, but to manifeſt advantage, in many ſcrofulous complaints: inveterate ophthalmies generally yield to it; incipient glandular tumours are very frequently reſolved, and their farther progreſs ſtopped; ſwelled lips, cutaneous blotches ariſing from the like cauſe, are healed, and the tendency to a ſtrumous habit corrected, by a proper uſe of the *Cortex Peruvianus*.

There are few, I believe, who are converſant in the practice of phyſic, who do not find occaſion, at one time or other, to be diſſatisfied with the ſeveral methods and medicines hitherto recommended in the cure of the diſorders I have been mentioning. A ſwelled lip, a blood-ſhot eye, will frequently baffle a courſe of efficacious remedies under prudent directions. When the diſeaſe is farther advanced, it grows more obſtinate; the greater the number of parts that are affected, the more the difficulties are increaſed. We have indeed a copious choice of alteratives handed down to us, all which, perhaps, have been, in particular inſtances, beneficial; but nevertheleſs

vertheleſs they too often diſappoint us. Moſt of the remedies propoſed for this diſtemper, are ſuch as ſeem recommended more with a view to alter the juices, than immediately to affect the ſolids: but we hitherto know much leſs of the nature of fluids circulating in an animal body, or how to alter them, than we do how to apply ſuch medicines as affect the ſolids, and, in conſequence thereof, produce certain alterations in the fluids.

It is not ſafe to infer, that the various kinds of ſalts have the ſame effects upon animal juices, whether taken from the animal, or circulating in their proper canals. Experience does not always warrant ſuch concluſions. The digeſtive powers of the ſtomach, by the ſame means that they convert different ſorts of aliments, ſome of them ſufficiently acrid, into a mild and milky fluid, ſeem able to deprive the moſt pungent ſalts of great part of their activity. And this circumſtance alone, in my opinion, renders a dependence upon one part of the *Materia Medica*, on which many pleaſing expectations have been formed, much to be ſuſpected; I mean the different kinds of ſalts recommended in ſtrumous diſorders. It is very certain that the effects of the acid and the alkaline greatly depend on the preſent diſpoſition of the juices in the ſtomach and firſt paſſages. The neutral ones are not altogether exempt from the ſame influence; and ſhould they paſs unaltered into the blood, we cannot aſcertain their effects upon it:

and

and could we even do this, can it reaſonably be ſuppoſed that a few drams of any kind of ſalt, however active, and properly adapted, mixed with ſo many pounds of blood, and other animal juices, could produce the effect we wiſh for, or be able to extirpate a diſeaſe, as the ancients expreſſed themſelves, *totius ſubſtantiæ*, and fixed in the moſt inacceſſible parts of the animal œconomy? The chance therefore of curing this diſtemper, by means of remedies deſigned to act on the fluids alone, is but little. It may indeed be urged, that ſalts, as ſtimulants, affect the ſolids as well as fluids; and that they may do ſo is granted: but in this caſe their operation is much confined; for it may be doubted, whether their *ſtimulus* extends beyond the firſt paſſages.

The aſpect, habit, and age of ſtrumous perſons; the nature of their tumours in reſpect to their formation, progreſs, and iſſue, ſeem to indicate a general laxity of the ſolids, as well as great viſcidity of the fluids, eſpecially thoſe contained in ſome particular ſeries of veſſels; which cauſes, when combined, proceed with a ſlow but conſtant efficacy to produce the worſt of miſchiefs, unleſs prevented by the interpoſition of ſome favourable change in the non-naturals, or by medical aſſiſtance.

It may indeed be diſputed, whether the ſolids being firſt relaxed, the fluids do not become viſcid, and unfit for their office, in conſequence of this relaxation; or whether the juices are not firſt vitiated, and from them a laxity of the ſolids

lids is inevitably derived. Caſes may happen in which one or the other of theſe ſuppoſitions may, with great probability, be admitted; but in either caſe, ſince it ſeems beyond diſpute, that the power of affecting the ſolids is more under our command than that of altering the fluids, it is reaſonable to direct our applications in the cure of this diſtemper more immediately to the ſolids, as, without their aſſiſtance, the fluids muſt ſtill remain in a morbid condition.

All internal remedies given by the mouth, and deſigned to act beyond the ſtomach, muſt be expoſed to the efficacy of the powers by which digeſtion is performed: it is therefore incumbent upon the preſcriber to conſider how far the virtues of the medicines he gives, are liable to be affected in their tranſit to the parts where he is deſirous they ſhould act. Moſt of the ſaline remedies, as hath already been obſerved, are liable to great alterations in the ſtomach. Alcaline and acid ſalts may become neutral and ſaponaceous; neutral ones may be diluted, and diſpoſed to run off immediately by the emunctories, and all of them contribute as little towards eradicating this diſtemper, as they do towards effecting the change we call digeſtion; a change whereby ſubſtances very remote from it are converted into an animal nature.

And it ſeems to me, that in the cure of all chronic complaints, however diſtant their ſeat may be from the ſtomach, thoſe will have the greateſt ſucceſs, who attentively conſider the preſent

ſent ſtate of this organ; who remove every obſtruction to its performing the office of digeſtion with eaſe, conſtancy, and expedition. For if digeſtion is well performed, the chyle is proper; the blood produced from this chyle is natural; the ſecretions, nutriment, and excretions, will be regular; health, ſtrength, and activity, enſue; and diſeaſes vaniſh. If digeſtion languiſh, the contrary happens, in ſpite of the beſt ſpecifics, unleſs one part of their virtues be to reſtore the injured faculties of digeſtion to their priſtine and natural ſtate.

And from the moſt attentive conſideration of the cure of many chronic complaints, and the moſt unprejudiced diſquiſition what ſhare the medicines applied have had in effecting ſuch cures; by much the greateſt part of theſe diſtempers ſeem to have been removed, rather in conſequence of the medicines given having had a certain effect on the ſtomach, and thereby enabling nature to do her own buſineſs, than by any ſpecific operations on the particular ſeat of the diſtemper.

If the immediate cauſe of intermittents does not reſide always in the ſtomach and firſt paſſages, it often does undoubtedly. An emetic ſometimes cures it, bitters of all kinds often; aſtringents likewiſe: and, in a word, whatever has a power of aſſiſting digeſtion, has, at one time or other, been recommended in the cure of agues. The Bark enjoys a degree of bitterneſs and aſtringency, that few other drugs are poſſeſſed

of

of in the ſame proportion. Some are more bitter, but with leſs aſtringency; others are more aſtringent, but leſs bitter. There are many caſes that yield to aſtringents, upon which bitters have no effect. There are others, that chamomile-flowers, wormwood, gentian, and the like, will often cure, in which aſtringents are of no uſe. But all theſe give way to the Bark, if the obſtacles to its efficacy are once removed.

Strumous diſeaſes are known to affect the glandular parts of the body particularly: they have been judged to proceed from obſtructions of theſe parts; and it has likewiſe been the opinion of ſome, that, in all glandular obſtructions, the Bark was an improper and injurious remedy.

It is well known how great prepoſſeſſions were raiſed againſt the Bark, ſoon after its diſcovery; ſo that thoſe who were its greateſt advocates, and, from experience, had the weightieſt reaſons to be ſo, could not altogether diveſt themſelves of many apprehenſions concerning it.

Sydenham imagines it capable of producing rheumatiſms. It has been found, ſince his time, to be an effectual remedy in this diſeaſe, under certain circumſtances. Thoſe who are ſubject to intermittents, are frequently liable to rheumatiſms. Sydenham did not obſerve, that a tranſition from one to the other, was eaſy and natural. The ſtate of the blood, in both caſes, is nearly the ſame; the colour of the urine, regular exacerbations of pain, going off in profuſe

ſweats,

ſweats, and many other particulars, are ſimilar in both. Had more of the Bark been given, no ſuch rheumatiſm had enſued: had the Bark been given before the rheumatiſm was fully formed, the Bark would have prevented it: had it been given when the pains remitted, ſo as to form a manifeſt apyrexy, the rheumatiſm would moſt probably have been cured.

The vulgar, at that time, took the advantage of ſuch circumſtances to ſtrengthen their prejudices againſt this remedy. Nothing was more common at that time, and nothing more firmly believed by many now, than that the Bark produces "pains in the bones," that is, rheumatic pains; which however were not owing to its uſe, but exiſted, only becauſe ſufficient quantities of it had not been given.

Sydenham was not the only eminent perſon of the faculty, who entertained ſuch unjuſt prejudices againſt this remedy: the great Boerhaave, who did much in the theory of phyſic, in reſpect to ſeparating truth from falſehood, certainty from hypotheſis; yet, in practice, ſubmitted to the faſhion of his country in too many inſtances. An unconquerable dread of the Bark was one of theſe: he ſaw many chronic complaints, wherein the Bark had been given, and attributed them, too readily, and from opinion, rather than experience, to the uſe of this drug; though probably thoſe complaints aroſe from its not having been given in ſufficient quantities. This induced him to forbid the Bark to many Britiſh ſtudents

ſtudents at Leyden affected with agues, till thoſe very evils had befallen them, which he apprehended from the Bark; and ſome of them, to my knowledge, fell a ſacrifice to this unhappy prejudice, which ſeems in part to have proceeded from the following circumſtance:

The Bark commonly ſold in Holland, is not ſo good as that which we keep in the ſhops in England; for whatever is unſaleable here, will find a market in Holland; part of which no doubt is conſumed there; and from hence might ariſe many inconveniencies ſufficient to diſcourage the profeſſor. If a certain quantity of good Bark is neceſſary to take off an intermittent, and a much ſmaller quantity is given, and the kind greatly defective in point of efficacy, it is very certain, that little benefit can be derived from it. The violence of the paroxyſms may perhaps thereby be moderated, and the aſpect of the diſtemper changed, though the diſeaſe itſelf may ſtill remain, and be followed by a train of obſtinate complaints, not proceeding from the uſe of the Bark, but merely from its not being good, and not being given in ſufficient quantities.

The firſt attempts I made in the cure of ſome ſcrofulous complaints, by the Bark, afforded me ſufficient encouragement to proceed: and I have now the ſatisfaction to know many young people, of both ſexes, free from any appearance of this diſeaſe, who, in their infancy, had been infeſted with very painful ophthalmies, ſwelled lips, and

the like complaints, in ſpite of many efficacious remedies which had been applied.

It will not however ſucceed in all caſes; but there are few in which a trial can be attended with much detriment. I have never known it avail much, where the bones are affected, nor where the ſcrofulous tumour is ſo ſituated, as to be attended with much pain, as in the joints, or under the membranous covers of the muſcles; for when it attacks theſe parts, the *perioſteum* ſeldom eſcapes without ſome injury, in which caſe the bone will of courſe be likewiſe injured.

Here the Bark is of no effect: inſtead of leſſening, it rather adds to the fever that accompanies theſe circumſtances; and, if it does not increaſe the force of the miſchief, it ſeems at leaſt to haſten its progreſs.

I commonly make uſe of a decoction like the following, as a form in which a ſufficient quantity may be given, with the leaſt diſguſt:

℞. *Pulv. Cort. Per.* ℥i. *coque in aq. puræ* lb. ii. *ad* lb. i. *ſub finem addendo rad. glycyrrh. inciſ.* ℥ſs. *Colaturæ adde aq. nuc. M.* ℥ii. *M. capiat coch.* ii. iii. *vel* iv. *cum tinct. guaiac. vol. gut.* x. xx. *ad* lx. *uſque, bis terve quotidie.*

The powder ſoon becomes extremely diſagreeable to very young patients; and the extract, I think, is not ſo much to be depended upon, as may have been imagined. In making the extract,

tract, it is expoſed to ſo much heat, as muſt have ſome effect upon its virtues, and perhaps not to their advantage: and in adminiſtering it, if great care is not taken to mix it intimately with a proper vehicle, or ſome very ſoluble ſubſtance, in weak bowels it often purges, and not only diſappoints the preſcriber, but injures the patient. A ſmall quantity of the *Cortex Winteranus* added, gives the medicine a grateful warmth, and renders a quantity of compound water leſs neceſſary. And a little liquorice, a few raiſins, gum Arabic, or the like, added to the decoction before it is taken from the fire, by making the liquor viſcid, enables it to ſuſpend more of the fine particles of the Bark, and thereby improves the efficacy of the medicine, and, at the ſame time, renders it leſs diſagreeable.

A LETTER TO THE MEDICAL SOCIETY, CONCERNING AN ASTRINGENT GUM BROUGHT FROM *AFRICA**.

IN hopes that ſome of your correſpondents may have it in their power to procure us a drug, which, from a few trials already made of it, promiſes great advantage to the public; I take the liberty to ſend the following deſcription and account of it.

It is a hard brittle gum, of a deep red or almoſt black colour, and opaque; except the very minute fragments of it, which appear like bits of garnet, red and tranſparent.

It has no ſmell; but, applied to the tongue, it ſoon diſcovers a ſtrong, but grateful aſtrin-

* From the Medical Obſervations and Inquiries, vol. i. page 358.

gency; and great part of it diſſolves readily in the mouth, with ſomewhat of a mucilaginous ſweetneſs, joined with its ſtypticity. When it is coarſely powdered, and thrown into water, about five or ſix parts in ſeven, as near as I can gueſs, ſoon diſſolve, and communicate a deep red colour, and a ſtrong aſtringent taſte to the water: moſt of what remains undiſſolved appears to be reſinous. This gum differs from the red lumps of the common gum Senegal, in being much more brittle; and from the *ſanguis draconis* of the ſhops, in diſſolving in water; and from both, in having ſo remarkable a ſtypticity when taſted.

Its external appearance, indeed, is ſo much like that of the genuine or unmanufactured *dragon's blood*, that a good judge may eaſily be deceived thereby; but its aſtringent taſte and ſolubility in water manifeſt an eſſential difference.

I have had ſpecimens ſent me of an opaque reddiſh gum, but ſeemingly the produce of a very different tree, as it does not diſſolve ſo readily in water as the former, and its taſte is bitter and auſtere.

The firſt time I had any intimation of the gum I have been deſcribing, was in a conſultation with the late Dr. Oldfield, on account of an obſtinate chronical *diarrhœa*, in which ſeveral efficacious medicines had been uſed in vain. On this occaſion the Doctor one day mentioned the good effects he had met with in ſome ſuch caſes from

from a gum which he called the *true gum Senegal*, and described it to be of a deep red colour, a sweetish astringent taste, and brittle.

As I was at that time intent upon collecting and examining whatever had relation to the *Materia Medica*, I enquired for such a gum amongst the most considerable dealers and importers, but met with nothing that answered the Doctor's description.

A few years after this, in my return from Scarborough, I called upon an eminent druggist at York, who, amongst other curious parcels of drugs, shewed me the gum above described, for some of the finest dragon's blood, or *sanguis draconis off.* he had ever seen.

Upon tasting it, I soon discovered it was very different from any kind of dragon's blood yet known, and indeed that it ought not to be ranged under that name, as it was, for the most part, aqueous, manifestly astringent, and mucilaginous; from which circumstances, and its external appearance, I judged it was the gum that Dr. Oldfield had described to me under the title of the *true gum Senegal*; though I think there is good reason to object to this appellation, as the little we have yet received comes principally from the river Gambia, and the common gum Senegal has been in possession of that name, so far as appears to me, from its first discovery*.

* If a name was to be given to the drug in question, it may not be improper to call it, *Gummi Rubrum astringens Gambiense.*

The gentleman who ſhewed me this drug, informed me, he had purchaſed it on board a Guinea ſhip *at Hull:* the whole parcel amounted but to a few pounds; all which he bought, and ſold to the moſt curious of his cuſtomers, as a rare ſort of the true dragon's blood.

This information induced me to look into the books of ſome of the later African travellers, in one of which, viz. *Moor's Travels into the Inland Parts of Africa*, we have the following accounts of it. In a letter of inſtructions from the Governor of James's Fort, in the mouth of the river Gambia, to our author at Brucoe, a factory up this river, dated May 27, 1733, is the following paragraph, p. 113, edit. 2d.

" There is a red liquor that bleeds plenti-
" fully from the bark of a tree called * *pau de*
" *ſangue*, upon the inciſion, and in little time
" hardens to the conſiſtence of gum, which is of
" great value: and therefore you are deſired to
" uſe your utmoſt to procure large quantities
" of it."

In reply to this, our author writes, the next month, to the Governor as follows:

" I have ſent a piece of gum, which I believe
" was taken from the *pau de ſangue*; I deſire
" you will pleaſe to examine it, and let me
" know if it is the right ſort; becauſe, if it is,
" I will do my utmoſt to procure large quanti-

* The word *pau* ſeems to be a corruption of the Portugueſe *palo*, ſignifying wood.

" ties of it." And gives this further account of it at p. 148: " I had always the utmoſt re-
" gard to all their (the Directors) orders, and
" therefore applied myſelf to enquire after any
" new kind of goods that could be had, parti-
" cularly gum. The ſame having been repeated
" to me by Mr. Hull (Governor of James Fort)
" I ſent him a ſample from Brucoe, as I men-
" tioned before, which proved gum dragon. I
" ſtrove to get more of that kind, but, it being
" a new thing, the natives could not be pre-
" vailed upon to follow it, ſo as to bring in any
" quantities; for they would bring me in all
" kinds of gum, ten or twelve pounds at a time,
" which I picked, and did not find, perhaps,
" above two pounds of gum dragon in that
" quantity: the reſt was like gum Senegal, but
" not ſo good.

" Gum dragon comes out of a tree" (adds our author) " called *pau de ſangue*, which has a
" very rough bark; upon wounding of it, it
" ſweats out in drops like blood; which joining
" together, and being dried by the ſun, congeal
" into lumps. I have had ſome as large as pul-
" lets eggs."

Perhaps it may be mentioned by other writers; but this account I think ſufficient to direct any perſon, into whoſe hands your collection may come, and who may have occaſion to traffic in that part of the world, to make proper enquiries after it.

You will obſerve, from the inſtructions given

to our author, that at leaſt ſome expectations had been formed of its uſefulneſs; and indeed, from the trials that have been made, from its ſenſible qualities, and Dr. Oldfield's experience, I cannot but think it an article worth enquiring after, as it may in time become a valuable addition to the *Materia Medica*, as well as of ſome little benefit in commerce, and perhaps in colouring likewiſe.

The diſtempers in which this drug ſeems to promiſe ſome advantage, are, in particular, habitual *diarrhœas*, *fluor albus*, immoderate menſtrual diſcharges; and, in general, all ſuch diſeaſes as proceed from laxity and acrimony.

EXPERIMENTS

EXPERIMENTS

ON MIXING

OILS, RESINOUS AND PINGUIOUS SUBSTANCES WITH WATER,

By Means of a VEGETABLE MUCILAGE:

In a Letter from Mr. JAMES BOGLE FRENCH, Apothecary in *London*, to Dr. JOHN FOTHERGILL.

With REMARKS by the ſame *.

Wood-Street, January 18, 1757.

SIR,

I MADE the experiments you deſired, and I own with a ſucceſs that exceeded my expectations. I may venture to aſſure you, they have been performed with ſo much accuracy, that, I believe, you may ſafely rely on any inferences to be made from them.

I am, with great eſteem,
Sir,
your moſt obliged
humble ſervant,
JAMES BOGLE FRENCH.

* From the Medical Obſervations and Inquiries, vol. i. p. 412.

Experiments

Experiments on mixing Oil and Water by means of a Mucilage.

THE mucilage I first made trial of was the following:

I dissolved four ounces of clean gum Arabic in eight ounces of New-River water, which formed a mucilage of the consistence of a thick syrup.

EXPERIMENT I.

To two drachms of this mucilage, I put half an ounce of olive-oil, and one ounce of water. By agitation, the mixture assumed the appearance of an emulsion, and continued so, after standing about three or four minutes, when the oil and water began to separate.

EXPERIMENT II.

I put the same quantity of oil and water to half an ounce of the mucilage. This mixture likewise, by agitation, soon became like an emulsion, and remained so as long as the former.

EXPERIMENT III.

I tried the same experiments with a like quantity of oil of almonds. A perfect uniform emulsion was produced; but, on standing three or four minutes, a separation ensued.

EXPERIMENT IV.

Two drachms of oil of almonds, half an ounce of the mucilage, and two ounces of water, were put

put together; these, by shaking, soon had the appearance of an uniform emulsion; though, on standing, they separated as in the former experiments.

EXPERIMENT V.

I put half a drachm of the powder of gum Arabic to the same ingredients as in Experiment I. and found, that, by means of a somewhat longer agitation, the like union was obtained; and this was also more lasting. Of the several oils made use of in the experiment, I think the oil of almonds unites the most speedily, and remains united in the form of an emulsion, much longer than any of the others.

EXPERIMENT VI.

To one drachm of symple syrup, and one drachm of the mucilage, I put half an ounce of olive-oil, two drachms of proof spirit, and one ounce of water. These, by a short agitation, produced a very uniform emulsion, and retained this appearance several minutes.

EXPERIMENT VII.

The same ingredients without the syrup, in the same proportions, shook together an equal time, did not afford so equable a mixture, and a separation sooner ensued.

EXPERIMENT VIII.

To one drachm of oil of almonds, I put two drachms of honey, and one ounce of water. These, by agitation, were seemingly united; but soon parted upon standing.

EXPERIMENT

EXPERIMENT IX.

Inſtead of the mucilage, I made trial of ſome of the more viſcid ſyrups, but none of them ſucceeded ſo well as the mucilage: the ſyrup of marſhmallows anſwered the beſt; though this but indifferently, and not without labour.

EXPERIMENT X.

One ſcruple of the powder of gum Arabic, with one drachm of *balſam. Peru. capivi*, and *balſam. guaiac.* two drachms of proof ſpirit, and one ounce of water, unite eaſily by agitation. The balſam *guaiac.* by this means affords a mixture of a fine blue colour, laſtingly uniform; with the *balſam. Peru.* it did not long continue mixed, tho' on ſhaking, it re-aſſumed a good appearance.

EXPERIMENT XI.

To one drachm of *balſam. capivi*, was put one drachm of the mucilage of gum Arabic, and one ounce of water. Theſe, by agitation, preſently formed a neat ſmooth draught, tho' the parts ſeparated a little upon ſtanding.

Experiments on mixing Oils, &c. by Attrition.

EXPERIMENT XII.

To one drachm of the mucilage of gum Arabic, I put two drachms of olive-oil, and one ounce of water. Theſe, by moderate attrition in

in a mortar, formed a neat emulſion, and continued perfectly mixed many days.

EXPERIMENT XIII.

Oil of almonds and linſeed, in the ſame proportions, treated as in the former experiment, made as perfect an emulſion, and kept united in the ſame manner.

EXPERIMENT XIV.

I varied the proportions of mucilage and oil, but found the mucilage would not keep more than double its quantity of oil, united with water, any conſiderable time.

EXPERIMENT XV.

A drachm of mucilage, and a drachm of *balſam. capivi*, being firſt well rubbed together, and an ounce of water added, formed an homogeneous milky liquor, which remained intimately mixed many days.

EXPERIMENT XVI.

The ſame quantity of yolk of egg, mixed the balſam and water as ſpeedily, and the mixture remained united as long as the former; but the taſte of this was more unpleaſant.

EXPERIMENT XVII.

A ſcruple of the mucilage mixed half a drachm of *balſ. Peru.* with an ounce of water, as perfectly and expeditiouſly as a like quantity of the *vitel. ovi*, and covered the taſte of the balſam much better, though it parted ſooner from the mucilage

mucilage than the *vitel. ovi*, when thus mixed in equal quantities.

EXPERIMENT XVIII.

Balſam of Gilead, the thinner Straſburgh turpentine, the fine liquid reſin of late years brought from Newfoundland and Nova Scotia, commonly called *balſamum Annapolitanum*, treated in the ſame manner, united with water as readily, by the means of the mucilage, as when the *vitel. ovi* is uſed, and the taſte at the ſame time was better.

EXPERIMENT XIX.

To half a drachm of mucilage of gum Arabic, I put one drachm of *balſam. guaiac.* one drachm of proof ſpirit, and one ounce and a half of water, which, by attrition, made a very ſmooth draught, and did not ſeparate: that by agitation (EXP. X.) was of a deeper blue colour; perhaps this was owing to the parts not being ſo perfectly divided; but both ſucceeded well.

EXPERIMENT XX.

I took one ſcruple of *gum guaiac.* in powder, one ſcruple of mucilage, and one ounce and a half of water, which I rubbed carefully in a marble mortar; I did the ſame with the *vitel. ovi*; and, on ſtanding ſome days, it appeared that the gum was beſt ſuſpended by the mucilage.

EXPERIMENT XXI.

Gum benzoin diſſolved almoſt entirely by this management,

management, and continued perfectly mixed with the water a considerable time.

EXPERIMENT XXII.

One scruple of *balsam. Tolu*, one scruple of the mucilage, with the same proportion of the other ingredients as in the former experiment, succeeded rather better, and made a neat draught full of the flavour of the balsam.

EXPERIMENT XXIII.

Myrrh half a drachm, mucilage of *gum Arabic* one drachm, first rubbed together, and then mixed with one ounce and half of water, formed a smooth uniform mixture, which continued equally united several days, when a small part subsided, but, upon shaking the mixture, soon resumed its former appearance.

EXPERIMENT XXIV.

The same quantity of myrrh readily dissolved, by attrition, in the same quantity of water, without the mucilage, but the different parts soon separated.

EXPERIMENT XXV.

Half a drachm of the common styrax, treated as the myrrh, (EXP. XXIV.) so far dissolved, as to communicate a strong but fine flavour to the water.

EXPERIMENT XXVI.

I took five grains of camphire, with a scruple of mucilage of *gum Arabic*, and an ounce and half of water, and it formed a very agreeable draught,

draught, which, on ſtanding ſome nights, ſeparated but very little.

Experiment XXVII.

I melted bees-wax in ſpirits of wine upon the fire, and filtered off the ſpirit: half a drachm of the wax ſo treated, rubbed with a drachm of mucilage, mixed with an ounce and a half of water, ſo as to appear like an uniform emulſion; but this requires ſome labour: the wax ſoon ſwims at top, but eaſily mixes again by agitation.

Experiment XXVIII.

A ſcruple of *ſperma ceti*, rubbed with an equal quantity of mucilage, makes an elegant draught: but more labour is here required than in the common ſolution with yolk of egg; the mixture continues, however, much longer homogeneous, the *ſperma ceti* appearing only like a cloud on the top of the phial ſome days after; but, on agitation, becomes perfectly ſmooth, and its taſte as little rancid as when the mixture was freſh made.

Experiment XXIX.

Four grains of muſk, one ſcruple of the mucilage of *gum Arabic*, one ounce and half of water, of ſpirituous water and ſimple ſyrup, of each a drachm, with very little labour, form an agreeable draught; which appeared uniform, and continued ſo for ſome time, when the muſk ſubſided a little, but, by a ſlight agitation, ſoon reſumed its firſt uniform appearance.

Experiment

EXPERIMENT XXX.

I took one ſcruple of *balſam. ſulph.* with a ſcruple of mucilage, and one ounce and half of water; and this alſo mixed agreeably, and ſeparated but little on ſtanding ſome time: the taſte was likewiſe leſs offenſive than might have been expected.

EXPERIMENT XXXI.

With ten drops of oil of cloves, one ounce of water, and a ſcruple of mucilage of *gum Arabic*, a perfect union may eaſily be produced, and the mixture continues uniform many days.

EXPERIMENT XXXII.

I tried the ſame experiment with five drops of oil of cloves, anniſeeds, and nutmegs, by means of the mucilage of *gum Arabic*, and an ounce and half of water, which readily united.

EXPERIMENT XXXIII.

A mucilage was prepared of clean *gum tragacanth*, diſſolved in the ſame water, and of a ſimilar conſiſtence with that made from *gum Arabic*: with this mucilage I repeated the preceding experiments by agitation, but could not unite oil and water by this medium ſo ſpeedily or laſtingly as by the mucilage of *gum Arabic*, though I made uſe of double the quantity of mucilage to that of oil in ſome of the experiments.

EXPERIMENT XXXIV.

The mucilage of *gum tragacanth* was alſo tried with the balſams, by attrition, but a larger quantity was required, and the union was neither ſo

perfect nor ſo laſting; though by ſimple agitation, double the quantity of mucilage mixed the balſam and water ſo well as to have the appearance of an uniform emulſion; but the parts ſoon ſeparated.

Experiment XXXV.

Many of theſe experiments, by attrition, I repeated with mucilage of quince-ſeeds, made of the like conſiſtence with the others I had uſed; and found the mixture ſucceeded very well, and in moſt of them better than with the mucilage of *gum tragac.*

Experiment XXXVI.

I likewiſe made trial of ſtarch, reduced to a jelly by boiling it with water, and found that this alſo united many of the liquid reſins; though on ſtanding they ſeparated: ſeveral ſyrups were likewiſe made uſe of for the like experiments, but ſcarcely any of theſe ſucceeded: ſyrup of marſh-mallows anſwers the beſt; but even this is inferior to a much ſmaller quantity of the mucilage of *gum Arabic* of the ſame conſiſtence.

Experiment XXXVII.

I tried to cover the acid of vitriol by theſe mucilages, and found that of *gum Arabic* anſwered beſt; the quince-ſeeds better than the *tragacanth*; and that better than the *ſyrup altheæ:* theſe I did by agitation.

REMARKS

REMARKS

ON THE PRECEDING EXPERIMENTS,

By *J. FOTHERGILL*, M.D.

IT may not be improper to acquaint the Society with what view the preceding experiments have been made, and what purpoſes they are intended to ſerve: I ſhall do this with as much conciſeneſs as I can, and ſhall point out ſome of the advantages which I think may reſult from them.

In 1748, I received a MS. from a correſpondent at Dublin, intituled, *A new method for the improvement of the manufactures of drugs*, in a treatiſe on the *elixir proprietatis*, which was printed here the ſame year under this title: at that time I aſcribed it to Dr. Rutty, from whom I received it, though it was ſent to me as the work of an anonymous acquaintance: but I have ſince been informed, the public is indebted for it to H. Barton, an ingenious apothecary in Dublin.

Though theſe circumſtances may ſeem foreign to the ſubject, yet as I think the treatiſe above-mentioned contains much uſeful inſtruction, and as I am obliged to it for the hint which gave riſe to the preceding experiments, and for the ad-

vantages received from them, I think it is but juſtice to give the public this information,

Our author tells us (in page 20) that he diſſolved gum Arabic in water to the conſiſtence of a thick mucilage, with this made an union of turpentine with water, in the form of a neat, ſmooth emulſion: he likewiſe acquaints us, that the ſame mucilage, with ſome oil of almonds and common water, were mixed together in the form of an emulſion.

At this time I was engaged in ſome enquiries into the origin of amber; and, as I had many reaſons to believe that it was a vegetable reſin, reduced by time and a vitriolic acid into the condition we now ſee it, I imagined it not impracticable to produce a ſubſtance reſembling amber in many of its properties.

To mix a ſtrong vitriolic acid intimately with any of the vegetable reſins, was a difficulty I could not ſurmount, till I met with the treatiſe above mentioned; for the oil of vitriol burns that part of the reſin which it touches, the moment they come in contact; and if the oil is lowered with water, it will not mix by any other means I am acquainted with, ſo intimately, and without burning the reſin, as by the aſſiſtance of a mucilage; and I had the pleaſure of obſerving, from the firſt eſſay I made, that the mixture inſtantly gave the fragrance of amber ſufficiently ſtrong and diſtinct.

Other affairs took me off from proſecuting this enquiry any farther at that time; but I have

ſtill

ſtill made uſe of the ſame contrivance to exhibit ſeveral medicines in a liquid form, which, with reſpect to extemporaneous preſcription, are ſome of the moſt untractable in the *Materia Medica*.

Expreſſed and eſſential oils, balſams, reſins, gummi-reſins, reſinous tinctures, pinguious animal ſubſtances, by the means of a vegetable mucilage, are rendered to a certain degree miſcible with water, and capable of being adminiſtered, in this form, as ſpeedily and effectually, as by means of the *vitellum ovi*, the common medium now in uſe.

The mucilage has beſides this further advantage; it is ſeldom foreign to the preſcriber's intention; when he gives theſe ſubſtances, it is not known to diſagree with the ſtomach in any caſe; which cannot be ſaid of the *vitel. ovi*; it is not liable to become rancid and exceſſively prejudicial; and, what will be of weight with ſome compounders, it is much leſs expenſive.

When I was ſatisfied, from my own experiments, that this method was in moſt caſes preferable to any other commonly practiſed; and thought it might be of uſe to others; I prevailed upon J. Bogle French, an ingenious apothecary, with whom I was caſually converſing upon the ſubject, to be at the pains of making ſome experiments, on purpoſe to determine, whether the proportions I had commonly uſed, were the moſt proper; whether any other mucilage would ſucceed better than that which I had commonly uſed, *viz.* the mucilage made from gum Ara-

bic; and whether ſimple agitation would not, in many inſtances, render the mixture ſufficiently uniform to be exhibited without diſguſt.

With this view divers experiments were tried, by putting the ſeveral ingredients mentioned into a phial, and ſhaking them together. This is all that is meant, when the union is ſaid to be performed by agitation. And it appears from ſeveral of the experiments, that this proceſs is all that is neceſſary to mix ſeveral liquids together, which have hitherto required much more labour by any other method, *viz.* expreſſed and diſtilled oils, the more liquid reſins, and reſinous tinctures.---There are however ſeveral ſubſtances, *viz.* the thick balſams, reſins, and many others, that cannot be treated in this manner. Theſe were firſt rubbed with mucilage in a glaſs or marble mortar, the other liquids then added, and, by rubbing them together, were well mixed. This is all that is intended when mention is made of mixture by attrition.

It will appear from the preceding experiments, that the mucilage of *g. Arabic* is, of all others yet tried, the moſt proper, and ſucceeds the moſt eaſily and laſtingly of any. That by means of this mucilage, and in ſome caſes even by the powder of *g. Arabic* alone, not only oils and reſins, but even pinguious ſubſtances may be reduced to the form of an emulſion with water. That though even a viſcid ſyrup alone effects this union with difficulty, yet an addition of ſyrup to the mucilage, renders the union more

perfect. (Exp. VI. VII.) That the addition of a distilled spirituous liquor does not prevent this union.

And that a proportion, like the following, will seldom disappoint the prescriber's expectation of forming a neat composition.

℞. *Aq. simp.* ℥iss. *Spirit.* ʒii. *Balsam.* ℈i. *Mucilag. g. Arab.* ʒss. *Syr. simp.* ʒi.

Or,

℞. *Aq. simp.* ℥i. *Ol. amygd.* ℥ss. *Syr. & aq. spir.* āā. ʒi. *Pulv. g. Arab.* ℈i. *Vel mucil. g. Arab.* ʒss. *M. agitando.*

That, in some cases, the mucilage not only acts this part the best of any, but conceals disagreeable tastes, and covers extreme pungency.

That it preserves the substance it is thus united with, and cannot be in hazard of contracting the putrid rancidity that the yolk of eggs, the medium hitherto most generally used, is liable to.

That camphire and musk may thus be exhibited in a liquid form, with certainty in regard to the dose; whereas nothing is more uncertain than the present method of administering them in a liquid form; which, where the dose can be ascertained, is often the best.

For camphire given in substance, either in pills or bolus, unless it is very carefully mixed, will often occasion great anxieties, from the pungency of a large particle of camphire vellicating the stomach. And the present *julepum e cam-*

phorâ is ſeldom prepared alike in any two ſhops.

The ſame uncertainty attends the muſk when given in a liquid form; for if the compounder values himſelf on the appearance of neatneſs, perhaps great part of the muſk is thrown away. The mucilage, however, unites it with water ſo readily and intimately as to make the whole ſmooth and uniform.

Bees-wax, from the difficulty of giving it in a liquid form, has hitherto been very little uſed *internally*; though in painful diarrhœas and dyſenteries, it ſeems to promiſe conſiderable benefit. From Exp. XXVII. it appears, however, that this ſubſtance likewiſe may be rendered miſcible with water, by firſt making the *Butyrum Cerae Bateanum*, and then dividing it farther by the powder or mucilage of *gum Arabic*. Half an ounce of the wax ſo diſſolved, with a pint of barley-water, a proper quantity of ſpirituous water, and a little ſyrup, forms an emulſion that in the caſes ſpecified may be given to advantage.

Sperma ceti beat fine in a marble mortar, with an equal quantity of the Arabic mucilage, forms a ſmooth paſte, which may be kept for uſe in this condition many days. It grows ſomewhat dry and hard by keeping, but contracts no apparent acrimony or rancidity. This paſte eaſily mixes with water by attrition, and ſpeedily forms an homogeneous milky liquor. This method of manufacturing the *ſperma ceti* for extemporaneous preſcription, ſeems the more worthy of notice,

as

as the preſcriber is ſupplied with a medicine leſs diſguſtful, and with more expedition, by this than by the uſual means, and at the ſame time with more eaſe to the compounder.

The moſt common method of uniting oils and waters at preſent, is, by means of ſome volatile alcaline ſalt or ſpirit; but there are many diſeaſes in which theſe are improper: oil is often preſcribed in nephritic caſes; to give it alone adds to the *nauſea* which the diſorder itſelf produces; here volatile ſpirits are foreign to the intention. The mucilage coincides with the general deſign, and produces an emulſion both grateful and ſalutary.

Another circumſtance that renders this method of exhibiting oils preferable in many caſes to that with volatile alkalies, is, that acids may be eaſily and agreeably given at the ſame time.

When I firſt began to uſe the mucilage for the purpoſe of mixing oil and water, in order to ſucceed the more effectually, I ſometimes directed a ſmaller quantity of mucilage, and likewiſe of the volatile, than would, of themſelves alone, be ſufficient to unite the oil and water together. But this, inſtead of promoting, prevented it entirely: the mucilage curdled; its latent acid deſtroyed the alcali; and no laſting union could be obtained, even by long attrition. Hard calcareous waters likewiſe render the mixture difficult, ſometimes impracticable.

But acids have no ſuch effect; the union ſucceeds as well when dulcified ſpirits of nitre, elixir

of

of vitriol, oil of vitriol, or any other acid I have yet tried, are added, as without them. Nay, their acidity is ſo far concealed, that a quantity may be given under this diſguiſe, in a ſmaller compaſs than by any other way I am acquainted with.

A LETTER

A

LETTER

RELATIVE TO THE

CURE OF THE CHIN-COUGH*.

To the Medical Society in London.

Gentlemen,

THE *tuſſis convulſiva*, or Chin-cough, is for the moſt part ſo troubleſome a diſeaſe, and ſometimes ſo fatal, that every hint conducive to abate its violence, and prevent the dangers ariſing from it, will, I doubt not, be acceptable to you and the public.

I have for ſome years made uſe of the following antimonial medicine, in the cure of this diſeaſe, and often with ſo much benefit to the patient and ſatisfaction to myſelf, as to induce me to mention it caſually to many of my phyſical acquaintance.

* From the Medical Obſervations and Inquiries, vol. iii.

From

From ſeveral of theſe, I have received ſuch favourable accounts of its ſucceſs, as to ſtrengthen my own opinion of its efficacy; and to eſteem it, though not a certain cure in all caſes, yet perhaps as uſeful a medicine in this diſtemper, as any we are yet acquainted with.

The compoſition is the following:

℞ *Pulv. e chel. cancr.* ʒß.
Tartar. Emetic. gr. ij.
Accuratè miſceantur.

The teſtaceous powder, in this caſe, is not particularly deſigned for any other uſe, than that of making the *emetic tartar* diviſible into very ſmall doſes with preciſion, and without difficulty. This proportion was fixed upon, as the whole is diviſible without a fraction; each grain of the powder containing one-ſixteenth part of *emetic tartar*. Where a very ſmall portion of this is wanted, the bulk may eaſily be increaſed by the addition of ſome other, or the ſame teſtaceous powder: where more of the *emetic tartar* is wanted, the quantity of the doſe is then ſufficient.

One grain, one grain and an half, or two grains of this compoſition, may be added to five or ſix of any teſtaceous powder, and given in a ſmall ſpoonful of milk and water, in the forenoon between breakfaſt and dinner, to a child of a year old: if this quantity does not prove ſufficient to excite vomiting, it ſhould be increaſed the next day to ſuch a doſe as will produce that effect;

and, in this manner, let it be daily repeated about the ſame hour.

This time of day, *viz.* between breakfaſt and dinner, has been fixed upon preferably to any other, on theſe conſiderations, *viz.*

If the puke is given early, the ſtomach being empty, a ſtraining, too great to be borne without detriment, might be occaſioned.

Was it given in the evening, the child would, perhaps, be robbed of too great a quantity of nutriment. Children's breakfaſts are, for the moſt part, ſoon digeſted; at leaſt, ſo much nutriment is taken up in a ſhort time, as that much inconveniency cannot enſue from the loſs of aliment.

At night, when the fever is vehement, half the former doſe of antimonial powder is given, with a few grains of *nitre*, and the *pulv. contrayerv. c.* This generally procures an agreeable *diaphoreſis*, and takes off ſome part of that moiſture which might probably have otherwiſe increaſed the irritation and oppreſſion of the lungs.

It is but ſeldom that phyſicians are conſulted at the beginning of this diſeaſe, as, for the moſt part, its acceſs is ſlow, and gives but little alarm, till it becomes ſo evident, as to render it difficult to do any thing more than mitigate the ſymptoms.

But, in moſt caſes, and in every ſtage of the diſeaſe, I have chiefly truſted to this proceſs; ſeldom having occaſion either to bleed, or to uſe any other kind of evacuation, unleſs to procure a

ſtool

ſtool or two daily, if the medicine above mentioned fails in this reſpect.

In this caſe a proper doſe of *magneſia*, given at bed-time, with the antimonial, ſeldom fails of anſwering our expectations. Sometimes no very manifeſt advantage appears to be gained by this proceſs in ſeveral days; but, if no material inconveniency ariſes, it will be right to proceed.

The firſt ſymptom of amendment uſually is, that the fits of coughing become leſs frequent, the fever abates, and the breathing is not ſo difficult; the fits however do not ſeem to leſſen much in point of violence, for ſome days; at length, however, the cough decreaſes, and every other ſymptom abates.

The child is then directed to take the puke only two days together, and omit it the third. Every other day will ſoon ſuffice, and, then, once or twice a-week till the cough is wholly gone.

During this proceſs, they are directed to drink aſſes milk, to eat ſparingly of the lighteſt meats, broth likewiſe, and milk in any ſhape. Quantity is ſtrictly to be regarded; for the more and oftener the ſtomach is filled, to the leaſt degree of oppreſſion, the longer the diſeaſe continues, and with greater violence.

The ableſt of the faculty, and thoſe of the moſt extenſive experience, have found, that to empty the ſtomach of its contents frequently has been the means of affording moſt relief. Oxymel of *ſquills* and *ipecacuanha* have ſtood foremoſt in the liſt of remedies for the Whooping-cough,

cough, a conſiderable time; and this apparently from the good effects obſervable from their operation.

This induced me to make trial of the remedy in queſtion, as having theſe particular advantages.

The medicine is almoſt taſteleſs, is in quantity very ſmall, and may be given in the moſt unſuſpected vehicle; no inconſiderable benefits, where we have to do with ſuch patients as are moſt expoſed to this terrible diſtemper.

It is, undoubtedly, more antiphlogiſtic than either of the medicines above mentioned, is leſs irritating in general, yet operates with equal certainty, and, perhaps, more energy.

It is a powerful diaphoretic; the good effects of which, in this caſe, have been already mentioned.

One thing, however, may be neceſſary to obſerve, in reſpect to the preparation I have deſcribed. It has been hinted to me, that it will not long preſerve its efficacy; and this decay is ſuppoſed to ariſe from the tartar being robbed of its acid by the abſorbent powder. This, if true, ſhould induce perſons to mix but a ſmall quantity at once, to keep it perfectly dry, taking care eſpecially, that the *emetic tartar* be prepared by a ſkilful hand.

I have purpoſely omitted any reflections on the nature of this diſeaſe, or particular deſcriptions of its progreſs, any farther than as they were connected with the hiſtory of this medi-

cine,

cine, as I know your deſign is rather to collect matters of fact than to build ſyſtems.

I would not, however, be underſtood to ſuppoſe, that this medicine will alone complete the cure of the Whooping-cough, at all times, and under all circumſtances: I know it will not; and that this, as well as every other medicine, is uſeful or otherwiſe, juſt as it is indicated. *Cantharides*, the *bark*, *muſk*, *caſtor*, and many other medicines, have doubtleſs been of great uſe in particular caſes, and may be in peculiar epidemic conſtitutions.

OBSERVATIONS

OBSERVATIONS ON THE USE OF HEMLOCK*.

SOON after Dr. Storck's account of the *cicuta* was publiſhed, I had ſeveral opportunities of trying it in the diſorders for which it was ſo ſtrongly recommended; but, with many others of the Faculty, I had too great cauſe to lament, that a ſpecific remedy for cancerous complaints was ſtill undiſcovered.

Nevertheleſs it appeared to be a medicine of great efficacy; and though it by no means anſwered my wiſhes in the cure of cancers and cancerous tumours, yet it ſeemed ſtill worthy of farther trials, has proved beneficial in various obſtinate complaints, and though I cannot produce one inſtance of a cancer cured by the *cicuta*, yet I can recollect ſeveral in which the pains have been mitigated for a time, the progreſs checked, and the diſcharge changed for the

* From the Medical Obſervations and Inquiries, vol. iii.

better in reſpect to colour, ſmell, and conſiſtence.

The following caſe may perhaps deſerve a place here, as one proof of theſe effects:

A gentleman, from one of our South American colonies, middle-aged, healthy, temperate, and active, had a wart-like ſubſtance grew up on one ſide of his noſe, not far from the inner *canthus*; and as I remember from an accidental injury. It gave him no pain, nevertheleſs he frequently endeavoured to pluck it off; by which it grew ſore and uneaſy. A practitioner there, promiſing him a certain and ſpeedy cure, applied *eſcharotics*, and increaſed the miſchief.

Being thus diſappointed of a cure, and the diſeaſe every day increaſing, he came to England in the ſummer of 1763. The ulcer had, by this time, deſtroyed the teguments almoſt round the orbit, and eat deep into the upper ſide of the ſocket. The globe of the eye remained, but wholly uſeleſs in reſpect to viſion, and almoſt without motion, the muſcles being deſtroyed. The pains were acute both in the globe itſelf, and parts ſurrounding, which were exquiſitely tender, and the ichorous diſcharge was extremely fœtid. He had long been under the neceſſity of taking large doſes of laudanum to procure ſome remiſſion from pain during the nights.

Under theſe circumſtances the *hemlock* was recommended to him. He took at firſt twenty grains a day, eight at noon, and twelve at night. This in a few days leſſened his pain, and the

quantity of laudanum was reduced in proportion. At length it was wholly laid aſide, the *hemlock* mitigating the pain intirely, without producing coſtiveneſs, thirſt, or head-ach. The doſe of *hemlock* was gradually increaſed to ſeventy grains a day: if he proceeded farther, it either made him ſickiſh, or created a ſingular kind of head-ach and giddineſs. Sometimes he grew weary of taking it, and omitted it for ſeveral days, and returned to it again as his pain or other circumſtances required. He is ſtill living, and ſtill continues to make uſe of the *hemlock*; and though the ulcer yet ſpreads, and moſt probably will do whilſt he lives, yet its progreſs has been remarkably ſlow, compared with its advances before the uſe of this medicine; its aſpect is more kindly, the diſcharge of a better conſiſtence, and the ſtench, while he takes the medicine, is ſo much diminiſhed, that thoſe who have occaſion to be near him can eaſily diſtinguiſh when he is taking the *hemlock*.

Various attempts were made with the *cicuta* externally, in infuſions, decoctions, and ſolutions of the extract in different liquids and different proportions; but they all gave more or leſs pain, and left an uneaſy ſtiffneſs round the edges of the ſore.

In a cancerous affection of the tongue, the extract of *hemlock* procured great relief; it abated the ſtench and eaſed the pain: but the relief was only temporary, and at length it failed in

affording any eaſe, or retarding the progreſs of the fatal diſorder.

It is not very uncommon to perceive, in theſe dreadful evils, ſome abatement of the ſymptoms ſoon after taking the *cicuta*, but the effects are too ſeldom laſting.

I have given it repeatedly in tumours apparently of a cancerous tendency; it has ſeldom ſucceeded to my wiſhes, in large ones eſpecially; in ſmall incipient hardneſſes in the breaſt, and other parts, I think it has been of uſe.

But the trials I have made of the medicine have not been confined to this claſs of diſorders. In ſcrophulous diſtempers, I think it has been much more beneficial than in the preceding: the firſt caſe in which it was given, turned out ſo favourably, as to induce me to think of it with ſome partiality; and to uſe it freely, though I own not always with equal ſucceſs. When the *cicuta* was introduced into public notice by Dr. Storck, the following caſe was under my care, *viz.*

A young gentlewoman of a thin habit, pale complexion, about twenty-eight years of age, had been afflicted at times, from her infancy, with ſcrophulous complaints, ſevere *ophthalmies*, glandular ſwellings, and other concomitants of this diſeaſe.

To remove theſe, no endeavours had been wanting; the ableſt of the Faculty had ſucceſſively been conſulted, and many famed empirical medicines

medicines had likewiſe been made uſe of. She had taken, under my directions, a decoction of ſarſaparilla, the bark, mild mercurials, ſea-water, and other efficacious medicines, but without benefit.

When a trial of the *cicuta* was thought of, ſhe laboured under the acuteſt *ophthalmy* ſhe had ever endured; her pulſe ſmall and feeble, her reſt and appetite diminiſhed, the *menſes* in ſmall quantities and pale, and every ſecretion irregular. The glands on each ſide the neck down to the clavicles, were ſwelled and hard, on one ſide particularly. And ſuch was her extreme ſenſibility of light, that ſhe ſat conſtantly on her bed within thick ſtuff curtains, and the light was excluded with the utmoſt care; the opening of her chamber-door gave her much pain.

Such was her ſituation when we began the *hemlock*; it was in the infancy of its uſe, and the doſes at firſt were ſmall. Some weeks had eſcaped before we got up to twenty grains a day. But the extract we uſed was good, and, ſmall as the doſes were, ſo much benefit was ſoon perceived as encouraged a ſteady perſeverance and an augmentation of the doſe. The *ophthalmy* quite went off, the ſwelling of the largeſt glands was conſiderably reduced, that of the ſmaller diſperſed, a better ſtate of health returned than ſhe had known for any length of time together, and has continued ſo ever ſince. She perſiſted in the uſe of the extract conſtantly for more than

a year, and without perceiving then or ſince any ill effects from it, in any reſpect.

I have ſince given it in many other ſcrophulous caſes, and frequently with advantage, to adults eſpecially; and indeed it is to them that I have for the moſt part preſcribed it, as children ſeldom can take any quantity of pills, and in any other form it is diſguſtful, if long continued. If the extract in any reſpect diſagrees, it is more difficult to learn this from children than adults; and, when given to children even in very ſmall doſes, I think it has produced ſlight ſpaſmodic affections. For theſe reaſons, I ſeldom uſe it in very young ſubjects, or in others of extremely irritable habits.

At the ſame time that the *cicuta* was adminiſtered in the caſe above mentioned, I made trial of it in the following:

A perſon of a thin and rather delicate habit, naturally healthy, about the thirtieth year of her age, began to have numerous red pimples break out about her mouth, noſe, and cheeks, with frequent and violent head-achs. The *menſes* became too copious, a *fluor albus* conſtantly followed; ſhe grew coſtive, loſt her appetite and ſtrength; obvious indications of acrimonious juices, and relaxed ſolids; the conſequences of much anxiety, labour, and ſolicitude.

Her face grew daily worſe, the pimples increaſing in number, magnitude, and hardneſs; forming ſmall tumours that ſometimes ſuppurated,

rated, but always ſlowly and with great pain; now and then ſome of the largeſt aſſumed a livid hue, and continued long in that condition.

The utmoſt care was taken in reſpect to diet, both as to quantity and kind; ſhe was extremely temperate in reſpect to liquors of any ſort; and, if any errors were committed, they aroſe from too much exerciſe in her family, and too conſtant ſolicitude.

To deſcribe all the attempts that were made in order to mitigate theſe complaints, with their various ſucceſs, would be uſeleſs, as they were ineffectual: it may ſuffice to obſerve, that ſhe followed the methods preſcribed for her with unremitting diligence, but without the deſired effect.

She was attacked with a tedious depreſſed fever while theſe endeavours were uſing, which left the hairy ſcalp of her head almoſt covered with ſmall *ſteatomatous* tumours, from the bigneſs of half a pea to the ſize of half a large walnut; the appearances in her face continuing the ſame, both in reſpect to number as well as pain, which, in froſty weather, was almoſt inſupportable.

Though nothing cancerous could be ſuſpected from her parents or her natural conſtitution, yet the hard livid tubercles on her face, yielding to no method hitherto attempted, created fears of their tending to miſchief: and this put me on trying the *hemlock*. She took it at firſt in ſmall doſes, increaſing the quantity as ſhe found ſhe

could bear it; and ſhe kept to it ſteadily, during the autumn, winter, and following ſpring.

The good effects ſoon became viſible in every reſpect. Her face grew clearer and better than it had been for ſome years; the immoderate diſcharges were reduced to a reaſonable quantity; the *ſteatomatous* tumours on her head were much leſſened, and ſhe enjoys better health, by the uſe of this medicine ſingly, than ſhe has done for ſeveral years. When ſhe finds any return of her former complaints, ſhe conſtantly has recourſe to the extract, which always gives her relief.

Permit me to mention a few more caſes, in which I have uſed this medicine with advantage.

A middle-aged man, healthy, active, and temperate, was attacked with a pain in one cheek-bone, about the *antrum Highmorianum*, and for which he could aſſign no cauſe. It grew to be ſevere, and continual, but was ſometimes heightened to a degree almoſt beyond bearing. Though a native of England, his reſidence was then in one of our North American colonies. He applied to many very able practitioners there, but without obtaining more than a temporary mitigation, by opiates. Mercurials, antimonials, alteratives, the bark, warm, cold, and ſea-bathing; drains of every kind were made uſe of, but to no purpoſe. Several teeth were drawn, and an opening made into the *antrum*, but fruitleſly. The pain ſometimes was abated, but it never wholly went off; its returns were frequent, ſeveral

ral times in an hour; and ſo cruciating, as to produce ſpaſmodic contractions of every muſcle about the face and neck, and even affecting the whole body.

Under theſe circumſtances he arrived from America, and brought with him an exact detail of the progreſs of his diſeaſe, and the means made uſe of for his relief.

Until I could have leiſure to conſider the caſe attentively, and what farther might be reaſonably propoſed, I ordered him to take the extract of *hemlock*, beginning with twenty grains a day, and directed him how to proceed in increaſing it.

He called about a week after (the time I had fixed), when I obſerved his countenance to be ſomewhat leſs diſturbed, and he owned himſelf rather better. He was adviſed to continue in the ſame method, which he did very conſtantly during the autumn and winter. In the ſpring, as he found himſelf much better, he took the medicine leſs regularly, and returned to America almoſt free from pain, and entirely ſo from any of thoſe ſpaſmodic contorſions, which accompanied him almoſt inceſſantly at his arrival. He took no other medicine during the whole time.

The following caſe, perhaps, may likewiſe be worth reciting:

A healthy ſober young man applied to me in the ſpring 1766, on account of a pain in his arm. The part affected was from about the middle of the *biceps*, down the inſide of the arm to the wriſt. He knew of no particular acci-

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dent that had brought it on, except taking cold; it was deemed rheumatic, and he had endured it a conſiderable time before I ſaw him. It was neither ſwelled, diſcoloured, or ſore to the touch; and alike uneaſy, both day and night.

It was treated as a rheumatiſm; mercurial alteratives, decoctions of the woods, the bark in various ſhapes, antimonials likewiſe and anodynes, were made uſe of; but without gaining any conſiderable benefit. He then took the extract of *hemlock* in a full doſe about a fortnight, when he found the pain began to abate. He continued it during the ſummer regularly, got perfectly well, and ſo remains.

A few inſtances of this kind naturally induce one to apply a remedy like this, in very diſſimilar caſes.

A married woman, between thirty and forty, a long time infirm, ſubject to coughs, hectic heats, and a train of complaints, ariſing from ſmall *vomica's* being frequently formed in the lungs and diſcharged, applied to me ſoon after a large one had broke. She had then a copious purulent *hæmoptoe*, inceſſant cough, quick ſmall pulſe, night ſweats, with loſs of appetite, and loſs of ſtrength. Soft demulcent cooling pectorals were given, with anodynes frequently in ſmall quantities, but to no purpoſe. A light decoction of bark with elixir of vitriol and anodynes ſucceeded no better. The extract of *hemlock* was then ordered to be taken three times a day, and to be waſhed down with a few ſpoonfuls of

tincture

tincture of roſes. The patient was ordered into the country, and I ſaw her no more, nor heard any thing of her, till I was informed, ſeveral months afterwards, that, from the time ſhe commenced this courſe, ſhe began to recover, kept in town, and grew well.

I was induced to make trial of it in this caſe, from conſidering the moſt uſual effects of *hemlock*. It is anodyne, corrects acrimony, and promotes the formation of good matter.

I have ſince made uſe of it in various pulmonic diſorders, though but ſeldom with the like ſucceſs. Where there are ſymptoms of tubercles forming, a ſtrumous habit, and a tendency to *phthiſis* from theſe cauſes, I believe it will often be ſerviceable. But to deſcribe the various trials I have made, and the various ſucceſs, would lead me beyond the bounds of an eſſay ſuitable to your deſign.

There are ſome things, however, which I muſt beg leave to mention more particularly, as they ſeem to me of conſequence in the uſe of the *cicuta*.

It is well known with what avidity the public embraced the expectations given by Dr. Storck. Every body made the extract, and every body preſcribed it. We ſoon found it would not perform all the wonders aſcribed to it, and, falling into the oppoſite extreme, many declared it would do nothing, and diſmiſſed it with diſgrace.

Much of the extract hitherto uſed, has not, I believe,

believe, been made with due attention to the ſeaſon when the plant is in its greateſt perfection. So ſoon as the plant appeared ſtrong and ſucculent, it was commonly gathered for uſe. But I know from repeated experiments, that the extract, prepared from *hemlock* before the plant arrives at maturity, is much inferior to that which is made when the *hemlock* has acquired its full vigour, and is rather on the verge of decline: juſt when the flowers fade, the rudiments of the ſeeds become obſervable, and the habit of the plant inclines to yellow, ſeems the proper time to collect the *hemlock*. It has then had the full benefit of the ſummer heat; and the plants that grow in expoſed places, will generally be found more viroſe than thoſe that grow in the ſhade.

In reſpect to the manner of preparing this extract, it may be neceſſary to obſerve, that the leſs heat it undergoes the better. Therefore, if a conſiderable quantity of the dry powder of the plant, gathered at a proper ſeaſon, is added, the leſs boiling will be neceſſary, and the medicine will be the more efficacious.

But let the extract be prepared in what manner ſoever it may, provided it is made from the genuine plant, at a proper ſeaſon, and is not deſtroyed by boiling, the chief difference obſervable in uſing it, is, that a larger quantity of one kind is required to produce a certain effect, than of another.

I have found that twenty grains of one ſort of extract have been equal in point of efficacy to thirty,

thirty, nay near forty of another, yet both of them made from the genuine plant, and moſt probably prepared with equal fidelity.

To prevent the inconveniencies ariſing from this uncertainty, it ſeems always expedient to begin with ſmall doſes, and proceed, ſtep by ſtep, till the extract produces certain effects, which ſeldom fail to ariſe from a full doſe.

Theſe effects are different in different conſtitutions. But, for the moſt part, a giddineſs affecting the head, and motions of the eyes, as if ſomething puſhed them outwards, are firſt felt; a ſlight ſickneſs, and trembling agitation of the body; a laxative ſtool or two. One or all theſe ſymptoms are the marks of a full doſe, let the quantity in weight be what it will. Here we muſt ſtop till none of theſe effects are felt, and, in three or four days, advance a few grains more. For the general experience of all who have uſed this medicine to any good purpoſe, with whom I have any acquaintance, agrees, that the *cicuta* ſeldom procures any benefit, though given for a long time, unleſs in as large a doſe as the patient can bear, without ſuffering any of the inconveniencies above mentioned.

Patients commonly bear a greater quantity of the extract at night, than at noon; and at noon, than in the morning. The method I commonly follow is to order ʒij. to be divided into thirty pills, not gilt. Adults begin with two in the morning, two at noon, and three or four at night, with

with directions to increaſe each doſe, by the addition of a pill to each, as they can bear it.

The extract of *hemlock*, given in this manner, is apparently anodyne; it promotes reſt, and eaſes pain. It ſeldom creates thirſt, or that kind of morning head-ach, which ſucceeds an opiate of any kind.

It ſeldom occaſions coſtiveneſs, but, in moſt, it procures a laxative ſtool the day following.

In ſome habits very ſmall doſes offend the ſtomach, excite ſpaſmodic twitchings, heat, and thirſt. In ſuch caſes I immediately forbid its uſe.

From the certain quality it poſſeſſes of altering the property of a thin, corroſive, cancerous ichor, and changing it to a milder fluid, I have been induced to try it in ſanious ulcers, and gleety, painful diſcharges from the *vagina*, and often with ſucceſs. Alſo in fixed excruciating pains, probably ariſing from acrimony, not diſſimilar to that of cancers.

The *Materia Medica* is already loaded with a number of very inefficacious ſimples, and it would give me extreme concern to aſſiſt in adding another to the catalogue: but, from the obſervations I have had an opportunity of making, and from the concurrent opinion of ſeveral of my medical acquaintance, I perſuade myſelf, that the *cicuta* will be an uſeful acquiſition, and will aſſiſt us in the cure of many diſeaſes, in which the medicines now in uſe are inadequate auxiliaries.

REMARKS

REMARKS

ON THE

HYDROCEPHALUS INTERNUS *.

I Have for a long time propoſed to myſelf, to lay before you ſome account of a diſeaſe which occurs more frequently, I believe, than is generally apprehended, and is very often confounded with another, to which, in many reſpects, it appears not diſſimilar; yet ariſes from a very different cauſe. At the ſame time, I muſt own to you, it is not in my power to ſuggeſt any probable means of curing the diſeaſe of which I treat: it has baffled all my attempts, both when confided in alone, and in conſultation with the ableſt of the Faculty. All that I pretend to do is, to exhibit ſuch an idea of this diſeaſe as may ſerve to make it known when it occurs in practice, and to form ſuch a prognoſtic of its progreſs and event, as may juſtify practitioners to themſelves, and to the families in which ſuch fatal occurrences may preſent themſelves.

* From the Medical Obſervations and Inquiries, vol. iv.

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I have juſt peruſed Dr. Robert Whytt's hiſtory of this diſtemper, in his works, lately publiſhed, in a tract at the end. The Doctor has done more in elucidating this ſubject, than any of the writers I have ſeen. It will appear from what I have to ſay on this ſubject, that we perfectly agree in the ſeat of the diſeaſe, in moſt of its ſymptoms, and in its fatality. Nevertheleſs, in ſome points, our obſervations have led us to make different concluſions.

The diſeaſes to which this I am treating of bears the neareſt reſemblance, are ſuch as are ſuppoſed to proceed from worms; and what increaſes the reſemblance is, that they are, for the moſt part, diſeaſes of the ſame age. I have ſeldom met with the *Hydrocephalus* in ſubjects younger than three years; moſt frequently it has happened, in my practice, from five to ten; two or three from ten to thirteen, and two caſes between ſeventeen and nineteen years of age. The laſt four were girls; the former moſtly boys; and none of them peculiarly unhealthy before they were attacked with this diſeaſe. Moſt of them had gone through the ſmall-pox, ſome the meaſles likewiſe; but without any reaſon to ſuſpect that theſe had left any foundation for this terrible complaint.

It happened, that ſeveral of thoſe who firſt of all came under my care in this diſeaſe, were either the favourites of the family, or the ſole hopes of their parents. I do not mention this as having any thing to do with the diſeaſe itſelf,

but as the cauſe of my not being able to learn what the diſtemper really was, ſo ſoon as I could have wiſhed. It was difficult to aſk, and ſtill more difficult to obtain leave, under ſuch tender circumſtances, to examine the ſubject. At length, however, I ſucceeded, and, in ſeveral diſſections, found the ſame cauſe ſubſiſting; *viz.* a collection of clear pellucid lymph, amounting in quantity, by appearance, to two, three, or four ounces, contained in the ventricle of the brain, under the *corpus calloſum*, from whence it was impoſſible to diſcharge it by any medicine or operation hitherto diſcovered.

The firſt caſe I met with I ſuſpected was owing to worms, and thought myſelf fully juſtified in exhibiting the moſt efficacious anthelminthics I was acquainted with, applying ſuch other remedies as particular exigencies required. When another caſe like this occurred, I early took the alarm, and requeſted aſſiſtance; but we were as unfortunate as I had been before. Once, ſometimes twice in a year, for ſeveral ſucceeding years, I had occaſion to ſee theſe unhappy objects. Of late years, they have not occurred to me quite ſo frequently, though I am now lamenting a diſaſter of this ſort, which has deprived a large and honourable family of the only male amongſt them.

Two or three inſtances I have met with, that had very ſtrong appearances of being entered into the laſt ſtage of this diſorder, but were happily recovered; they were actual worm-caſes,

and were cured by anthelminthics. I had been led, from theſe appearances that were ſo ſimilar to thoſe which attend the *Hydrocephalus*, to judge it was the ſame, and to form an unfavourable prognoſtic.

Dr. Whytt ſuppoſes, that the commencement of this diſeaſe is obſcure; that it is generally ſome months in forming; that, after ſome obvious urgent ſymptoms make aſſiſtance neceſſary, it continues ſome weeks before it ends fatally. This, in general, differs from what I have hitherto obſerved. I have ſeen children, who, from all appearance, were well, healthy, and active, ſeized with this diſtemper, and carried off in about fourteen days. I have ſeldom been able to trace the commencement of it above three weeks. We know very well how often thoſe who are unacquainted with theſe things aſcribe the beginning of diſorders to wrong cauſes, and date them from æras with which they have no connection. Thus every malady to which a child may be incident through the courſe of many years, ſhall be attributed to the ſmall-pox, a worm-fever, or ſome other diſeaſe, that has thoroughly rouſed the parents fears, though that very diſeaſe may have been happily terminated. One cannot be ſufficiently upon one's guard in aſcribing effects to cauſes that exiſted at a remote period.

In moſt of thoſe whom I have ſeen in this diſtemper, a pain in ſome part or other below the head was the firſt thing they complained of; moſt

moſt commonly about the nape of the neck and ſhoulders, often in the legs, ſometimes in the arms, but more rarely.

This pain was not always alike acute, nor always fixed to one place; ſometimes it ſeemed not to affect any of the limbs. In theſe caſes, the head and ſtomach ſeemed to be more diſordered; and indeed were always diſordered more or leſs from the beginning, as far as I could learn. When the pain was in the limbs, the ſickneſs or head-ach was leſs; when the head became the ſeat of complaint, the pain in the limbs was ſeldom or ever mentioned: ſome had very violent ſickneſſes and violent head-achs alternately.

From being perfectly well and ſportive, ſome were ſeized with theſe pains in the limbs, or with ſickneſs, or head-ach ſlightly, in a few hours, commonly after dinner. Some have been obſerved to droop a few days before they complained of any part being much indiſpoſed. In this manner they continued three, four, or five days, more or leſs, as the children were healthy and vigorous, when the diſtemper begins to ſhew itſelf in an alarming manner.

They then commonly complain of a moſt acute pain in the head, deep ſeated, and extending acroſs the forehead from temple to temple. They are generally very ſick between whiles, crying out in the moſt affecting manner, *Oh, my head! Oh, I am ſick!* alternately, and with ſhort intervals; doſing a little in theſe intervals,

breathing irregularly, and ſighing much while awake. Sometimes they only ſeem to breathe in ſighs for ſome minutes together.

The pulſe, from being regular as in health, as the diſeaſe creeps on becomes irregular; ſlower, for the moſt part, at firſt than it ought to be; it grows ſtill ſlower as the pain increaſes, gradually likewiſe irregular, the ſtrokes being made both with unequal force and in unequal times. The limbs, for the moſt part, are temperate, in reſpect to heat, after the firſt acceſs, which is often attended with feveriſh heats, eſpecially towards evening and the fore-part of the night, and till within a day or two of their diſſolution; the pulſe then becomes extremely quick, the breathing deep, irregular, and laborious, the heat exceſſive, and more general. The head is always hot from the firſt attack, and the *præcordia* likewiſe.

Almoſt every ſymptom that is known to attend an irritating cauſe exiſting in the brain, appears in its turn; firſt, pain in the limbs, ſickneſs, and head-ach.

Short diſturbed ſleeps, ſtartings, irregular pulſe, watchfulneſs, and the pupils of the eyes much dilated.

They are unwilling to be diſturbed for any purpoſe, are averſe to light, take things greedily, and cannot bear any poſture but that of lying horizontally. They attend leſs to objects; when aſleep, great part of the whites of the eyes are ſeen, and they are undiſturbed by any thing but moving

moving them. Their urine comes away inſenſibly, and their ſtools likewiſe. They often ſcream out moſt piercingly, but complain of nothing. One or both hands are moſt commonly about their heads. At length the eye-lids become paralytic, the *iris* immoveable: an attempt to raiſe the eye-lids with the finger, two or three days before they die, gives them no apparent uneaſineſs. The heat of the head and trunk becomes exceſſive; a great heat and ſweat ſpreads over the whole body, reſpiration is altogether ſuſpirious, the pulſe trembling, and quick beyond the poſſibility of counting, and the patient goes off gradually as the ſtrength fails; ſometimes a ſpaſm finiſhes the cataſtrophe.

In this recital, many ſymptoms appear, that are familiar to worm-caſes, teeth, and other irritating cauſes. Perhaps, it will be difficult to point out any that ſhall particularly characteriſe this diſeaſe. The pains in the limbs, and inceſſant head-ach, and ſickneſs, ſeem to me the moſt certain intimations of the danger. Theſe happen in other diſeaſes of children, but neither ſo uniformly nor ſo laſtingly.

Another circumſtance likewiſe is familiar, if not peculiar to this diſeaſe: I recollect not one inſtance, in which the patient was not coſtive, and in which likewiſe it was not without ſingular difficulty that ſtools were procured.

The ſtools are moſt commonly of a very dark greeniſh colour, with an oilineſs or a glaſſy bile, rather than the ſlime which accompanies worms.

They are, for the moſt part, ſingularly offenſive. The urine ſhews nothing to be depended on: it is various both in colour and contents in different ſubjects; depending chiefly on the quantity of liquids they get down, and the time between the diſcharges of urine. From their unwillingneſs to be moved, they often hold their water a long time; twelve or fifteen hours, ſometimes longer: they ſeldom complain of their belly: indeed when they complain of ſickneſs, they mention their belly; but, if one deſires them to point to it, they always lay their hand on the ſtomach. In diſorders from worms, this is not ſo generally the caſe. In theſe complaints, and thoſe attending dentition, ſpaſms are more frequent than in the diſtemper I am deſcribing. Children ſubject to fits, are ſometimes ſeized with them a few days before they die; ſometimes they continue for twenty-four hours inceſſantly, and till they expire; but this is not conſtant.

The moſt certain character marks itſelf indeed but too evidently, when one ſees all thoſe ſymptoms gradually advancing which attend a violent depreſſion of the ſcull; when a comatous oppreſſion ſeizes the brain, and diminiſhes, by degrees, all the faculties, till they are at length totally extinguiſhed, either by ſome violent ſpaſmodic efforts, or the *vires vitæ* being exhauſted.

With Dr. Whytt, I have called this diſeaſe the *Hydrocephalus internus*, or dropſy of the ventricles of the brain, till ſome more appoſite name can be given to it. From what remote cauſes

cauſes it may proceed, I am not ſo well ſatisfied as to decide on this point. Whether the breach of a lymphatic may not more commonly be the proximate cauſe, is ſubmitted to conſideration. It is a diſorder that happens, ſo far as I have had an opportunity of obſerving, more commonly to healthy, active, lively children, than to ſuch in whom, from previous indiſpoſition, there is room to ſuſpect an unequal or weakened abſorption.

And indeed, if we conſider the numberleſs little feats of activity that children of both ſexes are diſpoſed to, we cannot wonder that a veſſel of ſlight texture ſhould give way on ſome occaſion or other. I am the more inclined to be of this opinion, from the progreſs of this diſeaſe in many of the caſes that I have ſeen of it; from reflecting on the *juvantia* and *lædentia*; and, from this circumſtance being generally true, that in ſtrong vigorous conſtitutions, the diſeaſe is fatal in a ſhorter time than in the tender and diſeaſed, though perhaps not leſs active diſpoſitions. Sometimes I have been told, that the diſeaſe was thought to have taken its riſe from jumping from a conſiderable height upon a hard floor, a fall, or ſome pretty ſmart exerciſe: but however favourable ſuch accounts may be to the opinion already mentioned, yet I offer them with diffidence, and only with a view to promote further inquiry.

Were I to recite the different attempts to cure this diſeaſe, made both alone, and con-

junctly with ſome of the ableſt in the profeſſion, it would carry me beyond the bounds you have a right to preſcribe. It may be ſufficient to mention, that, whenever I am called to a patient in the earlier ſtages of this diſtemper, I proceed in the ſame manner as if the diſeaſe was ſuppoſed to ariſe from worms, or ſome cauſe of irritation capable of being removed.

Three or four grains of *calomel*, or more, according to the age and habit of the patient, with *rhubarb* and the *pulv. e ſcam. compoſ.* are given to empty the bowels, if this has not been done before ſufficiently. If the ſtomach appears to be loaded, a quarter or half a grain of the *emet. tartar.* may be joined with it, and the ſtomach waſhed with any ſuitable liquor.

After this, it ſeems prudent to abate the vomiting by the ſaline, abſorbent medicines, adding a few drops of the *tinct. Theb.* as occaſion requires, giving broth, thin decoctions of hartſhorn-ſhavings, and other ſuitable ſupport, as may be neceſſary.

Anthelminthics in broth are thrown up in clyſters, and ſmall doſes of anodynes occaſionally exhibited. A decoction of *ſem. ſanton.* with thirty or forty drops of *ol. terebinth.* in three or four ounces of broth; or aloes boiled in milk. All heating medicines ſeem to increaſe the malady; ſo does much warmth in the room.

If the diſeaſe actually proceeds from worms, the ſymptoms are moſt commonly at a ſtand af-

ter this proceſs, and, by a repetition at proper diſtances, it ſoon gives way; but, if the ſymptoms not only continue, but increaſe after a prudent repetition of theſe medicines, or ſuch as different practitioners may have found to be ſucceſsful in worm-caſes, there is too much reaſon to fear that the diſtemper is of a more fatal kind, and that the moſt ſtrenuous and well-directed endeavours will probably afford no relief.

One ought not, however, to ceaſe attempting to mitigate the moſt preſſing ſymptoms, by all the means in our power. The application of bliſters, ſinapiſms, embrocations externally; the leſs heating antiſpaſmodics, internally; and, at all times, taking care to keep the bowels, as much as may be, free from impurities, will, perhaps, afford ſufficient means to anſwer every reaſonable indication.

I need ſcarcely mention, that every opportunity of inſpecting the body ſhould be ſought for by the Faculty. Dangerous and incurable as it ſeems to be, its ſeat only known, and its fatal iſſue, we ought not to deſpair of tracing its beginning a little higher, aſcertaining the cauſes, and fixing its character with more preciſion. By treating the complaint, however, in the manner above mentioned, we loſe no advantage: we are almoſt ſure to ſucceed if the caſe be only worms; but if otherwiſe, we at leaſt are treating it in the moſt rational method, increaſing all the ſecretions, and thereby preventing any addition to

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the quantity of extravaſated fluid, to the utmoſt of our power.

From the preceding deſcription of this caſe, it will not be difficult to account for the ſymptoms; nor will it appear ſurpriſing, that the patients go off in the ſame manner as thoſe who die of a depreſſion of the ſcull; for it makes very little difference whether the external parts of the brain are crouded on the more central parts, or a fluid is perpetually preſſed into the cavities, near the center, ſtrongly forcing their ſides and the brain itſelf againſt the ſcull. So far as one can learn from the unhappy ſubjects themſelves, the kind of pain they feel, is not quick and darting, or like that of a boil or inflammation; but, though acute, is tenſive, and as if forcing the head aſunder.

When this paper was read to the MEDICAL SOCIETY, Dr. Huck ſaid, he believed that this diſeaſe was not confined to children, or ſuch as were under puberty only; for he imagined that he had ſeen it two or three times in adults, and gave me the following caſe, where diſſection put it out of doubt.

Hannah Hargrave, aged thirty, was admitted into the Middleſex hoſpital, on the 25th of October 1768. She was extremely languid, and ſo oppreſſed, that ſhe could not give a very diſtinct account of her illneſs. She ſaid, that ſhe had been ſick a week; that her chief complaint was a moſt excruciating pain in her head, with a vomiting of every thing ſhe took, mixed with

green

green ſtuff: ſhe ſaid ſhe was coſtive, giddy, thirſty, had great palpitations, and could get no ſleep: her heat was not greater than in health: her pulſe beat ſeventy-eight ſtrokes in a minute; ſhe had her menſes at that time. No means that were uſed gave her any relief: the head-ach, vomiting, though leſs frequent, and watchfulneſs, continued. On the 4th of November ſhe was light-headed, ſighed and moaned frequently: the pupils of her eyes were greatly dilated, and I thought ſhe could not ſee. On the 5th, I firſt obſerved a *ſtrabiſmus*; ſhe gathered up the bedclothes; her teeth were furred; but her tongue was not very dry; her pulſe was almoſt like to that of a perſon in health.

On the 6th, ſhe ſeemed every way worſe, continued muttering, moaning, always without ſleep, and paſſed her urine involuntarily. Her pulſe beat eighty-eight ſtrokes in a minute.

She died on the 7th, and her body was opened by Mr. Tickel, houſe-ſurgeon, the next day, in preſence of ſome of the pupils and myſelf. Nothing very remarkable was found, except about four ounces of water in the ventricles of the brain, and a larger quantity than uſual in the *theca vertebrarum*.

I have likewiſe ſeen two caſes lately of the like kind to appearance. Both were women: the firſt about ſeventeen, unmarried; the ſecond about twenty-five, married; and both apparently healthy, till they were ſeized with ſymptoms much

much reſembling thoſe deſcribed by Dr. Huck. Though there was no opportunity of confirming this opinion by diſſection; yet, from the ſimilarity of the ſymptoms, there was juſt ground to conclude, that this diſtemper is not ſolely confined to the age of childhood.

OF THE CURE OF THE SCIATICA*.

IT is always the object of my wishes, and endeavour, in the duties of my profession, to reduce the cure of diseases to all possible simplicity: and nothing affords me so much satisfaction, as when, by repeated cautious trials, a method occurs to me, of curing any distemper with some degree of certainty, ease, and expedition.

I am in hopes, that the method now offered to your consideration, will be found, by experience, to answer the end proposed, and assist practitioners in removing an obstinate painful disease with less difficulty, than by the methods hitherto employed for the purpose.

The *Morbus Ischiadicus*, or, as it is called in this country, the *Sciatica*, is a disease too well known by physicians to need any description; too painful not to require the speediest relief; and so obstinate as to resist many powerful remedies.

* Medical Observations and Inquiries, vol. iv. p. 69. Read August 22, 1768.

In

In the courſe of my buſineſs, many caſes of this nature have occurred to me, and, during a conſiderable part of my time, whenever they occurred, gave me much uneaſineſs. I found the remedies recommended for the cure of this diſtemper often inſufficient, always ſlow in producing a cure, and very often as painful almoſt as the diſeaſe itſelf.

It is at leaſt amuſing to ourſelves, if not inſtructive to others, to mention by what means we become acquainted with uſeful hints. I was deſired, many years ago, to viſit a man ſomewhat above forty years of age, who had long been confined to his bed, from the effects of a *lumbago* imperfectly cured. The violence of the pain was abated, but he was incapable of moving, or being moved, from the place he was laid, without ſuffering grievous torture. The part affected was the lower part of the *lumbar* region, from ſide to ſide, acroſs the loins. His fleſh was much reduced, his appetite decayed, and a feveriſh heat conſtantly attended him, the conſequence of pain and inanition. He had been many weeks under the care of a very able phyſician, who had attended with much diligence, and preſcribed, with judgment, very efficacious medicines. The patient was reduced to the neceſſity of taking opiates to procure a temporary relief. He had taken them a conſiderable time, and in doſes rather more than moderate, though not very large, before I ſaw him.

Not finding any reaſon to ſuſpect either an

internal abſceſs, or a tendency to it; but that the ſeat of the pain was in the tendinous parts about the loins, and deep, I directed a ſmall doſe of *calomel* to be given every night.

The following was the preſcription:

℞ *Calom. levig. gr.* x.
Tereb. e Chio. q. ſ. f. pil. x. *non deaurandæ. Capiat* j. *omni nocte.*

A laxative mixture was provided, to be taken in the morning, to procure ſtools, if he ſhould be coſtive. The opiate was gradually omitted.

Finding a grain of *calomel per diem* to have no effect, I ordered him to take two one night, one the next, and ſo to proceed.

His pains rather grew leſs by the time theſe pills were taken; but not the leaſt appearance of any effect from the *calomel* as a mercurial. I increaſed the doſe, till he got up to ſix grains of *calomel* every day, three at night and three in the morning; without ever perceiving any tendency to a ptyaliſm, purging, remarkable micturition, or diaphoreſis. The pains, however, gradually leſſened; he got up every day, recovered his appetite, got ſtrength, and, in five or ſix weeks time, was able to go abroad. He halted conſiderably, and made uſe of a walking-ſtick; but enjoyed tolerable health, and has not ſince been afflicted with any complaint of this nature.

Six grains of *calomel per diem*, for near a fortnight together, may ſeem a very large doſe to be taken

taken without producing the common effect of mercurials. It surprised me at the time; and I should by no means have proceeded to such a length, if experiment, conducted with some degree of caution, had not led me so far in this particular instance.

A gentleman of great eminence in chymistry had assured me, that he had found very good effects from *calomel* given in the manner above mentioned, with the *Chio turpentine*, in worm-cases, and all the diseases of children. Thinking that small doses of *calomel* would be as likely to remove a disease so deeply situated sooner than any other remedy, I had recourse to this medicine, and gave it in the manner above described.

On reflecting, however, on its effects, I found cause to suspect, that exhibiting *calomel* in the manner I had done, was using it in the most uncertain method. Most kinds of *turpentine*, I believe, are indigestible in the human stomach; the more solid their consistence, the more difficult they are to be dissolved in the human body. Great part of the *calomel* might, therefore, be so effectually wrapped up in the *Chio turpentine*, the hardest and most indissoluble of the whole class that are used in medicine, that I apprehend a very small proportion of the *calomel* ever came into action. From this consideration, I have seldom since given mercurials made into pills with this substance, unless where I wanted to give the smallest quantity possible; but have generally ordered

dered it to be formed into pills, with ſome ſubſtance that was eaſily diſſolvable, as ſome conſerve or confection. From the ſucceſs attending this caſe, I determined to make trial of a ſimilar proceſs in the *Sciatica*, and the event has generally anſwered my wiſhes. I recollect divers caſes of both ſexes, and different ages, in which a proceſs like the following has been of ſingular ſervice, after various other medicines and operations, recommended for the cure of this complaint, had been uſed to very little purpoſe.

℞ *Calom. levig. gran.* x.
Conſ. Roſ. q. ſ. f. pil. x. *non deaur.*
Capiat j. *omni nocte ſuperbibendo hauſt. ſeq.*

℞ *Aq. Alexit. ſimp.* ℥iſs.
Alexit. ſpir. ℥iſs.
Vin. Antimon. gut. xxx.
Tinct. Theb. gut. xxv.
Syr. ſimp. ℥j. *m.*

If the pain does not abate by the time this quantity is taken, I increaſe the doſe of *calomel* to two grains one night, one the next, and thus proceed alternately. When the pain abates, the anodyne and antimonial are gradually leſſened; perhaps omitted every other night, or wholly dropped. I have ſeldom met with a genuine *Sciatica* but has yielded to this proceſs in the ſpace of a few weeks, and has as ſeldom returned.

My inducement to make trial of this method

at firſt was, that this kind of pains are deep ſeated in the moſt fleſhy parts of the human body, and to which it is extremely difficult to convey the efficacy of any medicine entire, either given internally, or applied without.

That mercurials, of all the medicines we are acquainted with, moſt certainly pervade the inmoſt receſſes of the muſcular and tendinous parts, and remove diſeaſes which we know have in them their reſidence.

That, till theſe could take effect, it was neceſſary to mitigate the pain; for all painful diſorders increaſe in proportion to the irritation attending them. The anodyne, above directed, has other properties than that of an opiate merely. Like as in Dover's famous powder, the anodyne in this compoſition, when duly proportioned, reſtrains the antimonial from exerting its uſual efficacy on the ſtomach and firſt paſſages, and conducts it to the remoteſt parts of the circulation, rendering it an uſeful and efficacious medicine in many painful diſorders.

If the diſeaſe does not yield to the doſe above mentioned, I gradually increaſe it till ſome little tenderneſs is perceived in the mouth; but I have ſeldom had occaſion to proceed ſo far, or to ſubject the patient to any confinement, unleſs in very rigorous weather. As the violence of the pain may ſafely be mitigated by this kind of anodyne, which is not merely a palliative, I have always thought it better to proceed with the *calomel*, in the manner above mentioned, as an alterative,

terative, than to riſk any thing for the chance only of a few days ſpeedier recovery. Formerly I have had recourſe to the bark, *guaiacum*, the *terebinthinate* ſpirits, and other uſual medicines; but ſeldom to the patient's benefit, or my own ſatisfaction. Fontanels, bliſters, cauſtics, likewiſe, have produced as little advantage. Of late I have truſted to the proceſs above deſcribed, and have very ſeldom been diſappointed.

Bleeding has not been mentioned, becauſe in moſt of the caſes I have ſeen, it was unneceſſary. Phyſicians are ſeldom conſulted on theſe caſes in the beginning of the diſeaſe. In plethoric habits, this evacuation may be neceſſary as well as purging. Thoſe who ſee the patients early, will be the beſt judges of the neceſſity of theſe evacuations.

OF THE

USE of TAPPING early in DROPSIES *.

THERE are ſeveral efficacious remedies in the hands of phyſicians, which are often made uſe of ſo late in the diſeaſe, that they fall into diſgrace, from being applied when nothing could ſave the patient from inevitable deſtruction. Of this kind, perhaps, are bliſters applied to the head. The ſick and the by-ſtanders have conſented to this application, when nothing could be of uſe. The patient dies, and the bliſter to the head bears the blame, both as an ill omen from the phyſician, and as a barbarous application; when, in fact, it deſerves the imputation of neither. The phyſician, well knowing the general prejudice againſt the application of bliſters to the head, ſhifts off the propoſal longer than is right in his own judgment, through fear leſt the terror excited by ſuch a preſcription, ſhould do as much harm as the bliſter could do good. As the danger increaſes, this very bliſter

* Medical Obſervations and Inquiries, vol. iv. p. 114. Read November 14, 1768.

is then often called for by the patient's friends, when neither this nor any thing elſe can avail.

With what difficulty can we perſuade thoſe who are on the verge of a conſumption, and the hectic ſymptoms juſt in their infancy, to leave towns for a purer air, or ſeek the aid of Briſtol waters on the ſpot, while ſuch kind of remedies afford almoſt a certain cure! When the lungs are inflamed and ulcerated, and an incurable hectic, with all its waſting conſequences, are far advanced; then, whether the phyſician thinks any benefit can be received or not, they fly to Briſtol, when neither the water nor any other means can prevent their diſſolution.

Perhaps the operation of tapping may have undergone the ſame fate. Few dropſical patients can bear the name without apprehenſions of terror; and indeed not without reaſon: for, of the many who undergo this operation, how few are ſurviving inſtances of its advantage!

I think there is reaſon to ſuſpect, that tapping has incurred ſome part of its diſgrace, from its being delayed till it could have no other effect than procuring a very ſhort-lived hope to the patient, at the certain expence of the ſmall ſhare of ſtrength remaining.

I have endeavoured to prevail upon ſuch patients labouring under this diſeaſe as have requeſted my aſſiſtance, to ſubmit to it as early as poſſible, after I found that the quantity of water was ſuch as could not be removed by medicines, without doing great violence to the conſtitution.

There

There are ſeveral perſons now living, whom I prevailed on early to ſubmit to this operation. When I found the uſual diuretics had no effect, and the more active purgatives did as much prejudice by weakening the whole frame, bringing on thirſt, loſs of appetite, debility, and fever, as they did ſervice by the evacuation they produced; I deſiſted from medicine; allowed them to drink as much as thirſt required; and, when the fluctuation was ſo evident as to render the operation ſafe, it was performed. In one caſe, one operation alone ſucceeded: for, by diuretics and corroborants, proper diet and ſuitable exerciſe, the urine paſſed the kidneys freely, and the patient recovered perfectly. This was an evident *aſcites*, and came on ſoon after a lying-in; apparently from the power of abſorption being weakened beyond a ſpeedy recovery, and the exhalant veſſels being relaxed immoderately; the balance was deſtroyed, and a vaſt quantity of water was collected in a ſhorter time than I ever ſaw. All the *viſcera* ſeemed to be ſound, and none of the uſual cauſes of dropſies from intemperance had preceded. Had we perſevered with ſtrong purgatives or diuretics much longer, the tone of the abſorbent veſſels would perhaps have been ſo far weakened, as to have rendered tapping, or any other means, ineffectual.

Another caſe was, in a ſingle woman of about thirty-five years of age: the diſeaſe ſucceeded a tedious lingering fever, attended with great

thirſt; and very large quantities of thin liquors had been poured down, without diſcretion.

Apprehending the diſtemper proceeded from the diminiſhed power of the abſorbing veſſels, the redundancy of fluid, the general debility of the whole frame; very few medicines, except cordials, were given, till ſhe was full enough to be tapped. This was happily performed; but ſhe ſoon filled again. The operation was repeated. The medicines ordered for her now began to take effect. The urine was increaſed, her ſtrength returned, and ſhe left the town perfectly recovered.

If we conſider, that this operation is far from being one of the moſt painful, and that, if the fluctuation is ſufficiently evident, and the belly moderately tenſe, it is one of the ſafeſt, it ſeems to me, that we have nothing to fear, either in reſpect to ourſelves or our patients, if we recommend it as early as poſſible.

If I am called to a patient tending to a dropſy, the belly beginning to fill, the urine paſſing in ſmall quantities and high-coloured, the appetite failing, and thirſt increaſing, with the loſs of fleſh in the upper parts of the body; I have recourſe to ſuch diuretics, purgatives, and corroborants intermixed, as the ſtate of the caſe and the nature of its cauſes indicate. The preparations of ſquills, the neutral and alkaline ſalts, the *terebinthinate* balſams, afford many efficacious compoſitions. The purgatives are known

to

to every one. If, by a reaſonable perſeverance in this courſe, no conſiderable benefit accrues; if the *viſcera* do not evidently appear to be obſtructed and unfit for the future purpoſes of life; if the complaints have not been brought on by a long habitual train of intemperance, and from which there ſeems little hope of reclaiming the patient; if the ſtrength and time of life are not altogether againſt us; I deſiſt from medicine, except of the cordial reſtorative kind; and let the diſeaſe proceed till the operation becomes ſafely practicable: when this is done, by the moderate uſe of the warmer diuretics, chalybeates and bitters, alſo the preparations of ſquills in doſes below that point at which the ſtomach would be affected, I endeavour to prevent them from filling again.

If we recollect what happens in the cure of ſeveral incyſted dropſies, we ſhall find the opinion here advanced confirmed. Divers of theſe are cured by puncture; ſometimes once only; ſometimes the operation is neceſſarily repeated. You will remember many caſes, I doubt not, of the dropſies of the *teſtis* or *tunica vaginalis* particularly. I can recollect ſeveral within my own knowledge; ſome that have required but once tapping, others repeatedly, and yet at laſt have remained perfectly cured.

Should you, gentlemen, be of opinion, that theſe remarks are not ill-founded, I have no doubt but, from the ſhare of buſineſs which paſſes through your hands, the public will receive

ceive ſuch confirmations as may tend to diſſipate that dread of tapping, which, I am ſatisfied, is one great cauſe of the diſgrace under which it labours, and is alike injurious to our art, and detrimental to the patient.

Before I quit this ſubject, permit me to mention a method of ſcarification that has often ſucceeded in anaſarcous ſwellings of the legs and thighs; at leaſt, it has ſo far ſucceeded, as to draw off large quantities of water, without either ſo much pain or danger as in the common way by inciſions. Theſe are always painful, and, if large, are dangerous, from the known difficulty of healing wounds in anaſarcous habits.

I generally order this operation to be performed with the common ſcarificator uſed in cupping, and the inſtrument to be placed ſo as to make the wounds tranſverſely. If the ſkin is thick, the lancets may be ſet ſo as to make deeper, and conſequently wider inciſions. By this method, a large quantity of water will often drain from the legs and thighs, without riſk of inflammation, or deterring the patient from a repetition, if neceſſary. To proceed with as much ſafety as poſſible, I commonly order the inſtrument firſt to be applied about the middle of the calf on each ſide the leg, and either to one leg only, or to both, as occaſion requires. The application of glaſſes, either to raiſe the ſkin, or promote the diſcharge afterwards, is unneceſſary. The inſtrument is gently preſſed upon the ſkin till a ſurface is formed ſufficiently flat

to admit the lancets in the ſcarificator to take effect equally. By making theſe little openings in the ſkin tranſverſely, they give vent more freely to the fluid, and are longer before they unite.

Should it be aſked, in what caſes this application is proper; it is anſwered, that in all anaſarcous habits, where the *ſeroſa colluvies* gains upon us faſt, and the ſkin is ſo ſtretched as to threaten a rupture, or inflammation and gangrene, much miſchief may be prevented by theſe means. Likewiſe, where the breath is extremely affected in ſuch habits, a temporary relief may, in this manner, often be obtained, in order to give a fair chance to remedies adminiſtered internally. Your own experience, Gentlemen, will ſuggeſt to you many other uſes of this operation.

ALTHOUGH this case of Hemiplegia, and the two subsequent papers, have been published in the Medical Observations and Inquiries, *under an anonymous title, yet I have the authority of a letter, in which the Doctor adopts them as his performances. In the fourth volume of the* Observations and Inquiries, *in which these are included, many other of his pieces are inserted under his proper signature; but, with a diffidence which no author had less occasion to plead: that his name might not too frequently recur, he chose to suppress it in these three instances: this objection no longer subsists, and the utility of these essays sufficiently warrants me to disclose to the public, what the Doctor had previously disclosed to his friends.*

In the London Bills of Mortality a considerable reform is undoubtedly wanting; the subject had engaged his attention, and he had even sketched some outlines for effecting this reformation, which his want of leisure prevented him from completing for public inspection. Editor.

A HEMIPLEGIA,

A HEMIPLEGIA,

Attended with Uncommon Circumſtances,

Communicated by a MEMBER of the SOCIETY*.

ON the 27th of February, 1762, M. M. in the ſixty-eighth year of her age, was ſeized with a palſy, which entirely deprived her of the uſe of her right ſide, and of her ſpeech. At the firſt attack ſhe was inſenſible, and then ſhe had all the aſſiſtance that an able phyſician could give her; but as ſoon as ſhe recovered her ſenſes, all his preſcriptions were in vain; ſhe perſevered with obſtinacy to refuſe taking any medicine, or to ſuffer any outward application. All the time of her helpleſs condition, ſhe was conſtantly attended by two nurſes in the night, and generally by two likewiſe in the day-time, beſides her relations, who would frequently ſit by her, both to comfort and to amuſe her. She lived till the 5th of October, 1767.

* Medical Obſervations and Inquiries, vol. iv. p. 110. Read October 31, 1768.

From

From a little time after ſhe was ſeized with the palſy, till about five weeks before ſhe died, ſhe eat meat (more heartily and more greedily indeed, than in her former ſtate of good health) and by choice, rather the high-ſeaſoned diſhes, both for dinner and ſupper; but drank ſparingly. All this time ſhe was never ſick at her ſtomach, and ſhe never ſweated. Her urine was moderate in quantity; but neither its quantity nor quality could be aſcertained, as it came always from her upon cloths. She had frequently moſt excruciating pains in the urinary paſſages, which were ſuppoſed to be from gravel, and ſhe paſſed many ſmall round ſtones like ſhot. She had a conſtant ſpitting, or drivelling of *ſaliva*. She was coſtive from the beginning of her illneſs: and this complaint increaſed to ſuch a degree, that in a little time, ſhe ſeldom had a ſtool in leſs than a week; more frequently it was a fortnight, ſometimes three weeks, and ſometimes four, and twice together only once in thirty days; that is, *twice in two months, while ſhe was eating heartily all the time, and had no ſenſible excretion beſides, except the uſual quantity of urine, and the ſalival diſcharge above mentioned.* And both times, the evacuation probably would have been ſtill later, if four or five grains of *jalap* had not been daily taken (without her knowledge) in the beer that ſhe drank, from the time that ſhe had been a fortnight without a ſtool. After this the coſtiveneſs continued, though not to ſuch a degree, while ſhe lived, except once, that

ſhe was taken for a ſhort time with a violent purging, which threatened her immediate diſſolution.

During the laſt four or five weeks of her life, her appetite to food declined gradually. In the laſt eleven days ſhe ſwallowed neither food nor drink of any kind whatever. On the twelfth day ſhe had been prevailed upon to try if ſhe could take a ſip of her favourite liquor, ſmall-beer, with a little wine in it. Whether ſhe got any down or not, in two different attempts, was uncertain; but it could not have been more than a tea-ſpoonful each time. On the thirteenth day before her death, ſhe had taken one diſh of chocolate, which we may preſume, was the laſt nouriſhment ſhe took.

During theſe laſt twelve days, ſhe was perfectly in her ſenſes (till within a few hours of her death) and never expreſſed the leaſt degree of hunger or thirſt. She made rather leſs urine than before. Her ſtrength ſunk, or failed, in the moſt gradual way that could be conceived; and her breath and her diſcharges became ſo offenſive before death, that though great care was taken, the room could not be kept tolerably ſweet.

She was much extenuated in the courſe of her diſeaſe; and, at one time, it was with great difficulty that a mortification, from preſſure in the region of the *os ſacrum*, was prevented.

This account was drawn up by a relation of

the patient, who, from his ſituation, could not be impoſed upon with regard to any of the facts above mentioned; and it is communicated for the ſake of thoſe facts only.

ON PAINFUL CONSTIPATION FROM INDURATED FŒCES*.

To the Medical Society.

Gentlemen,

Permit me to plead the privilege offered in the Preface to your Firſt Volume, of remaining, if a writer pleaſes, concealed.

Your ſecretary is informed to whom he may apply, if any of the facts are diſputed. I am, &c.

I Know not of any writer who has given himſelf the trouble to acquaint young practitioners with a complaint that frequently occurs, is very troubleſome, may eaſily be miſtaken, and the miſtake be productive of very ſerious conſequences to the ſufferer.

You who practiſe in the metropolis, by daily conference with one another, learn many things

* Medical Obſervations and Inquiries, vol. iv. p. 123. Read November 14, 1768.

caſually, as it were, of much importance to yourſelves and to others, that make their way more ſlowly to the country.

It is known, that from many cauſes, from the uſe of the bark eſpecially, it happens, ſuch quantities of hardened *fæces* are ſometimes collected in the *rectum*, as nature, without aſſiſtance, is unable to expel. Many ſuch inſtances have occurred to me in the courſe of a moderate ſhare of buſineſs; and I doubt not, many more to you, Gentlemen, who ſeem to take the lead ſo happily in practice, as well as in a diſpoſition to communicate the reſult of your extenſive experience.

I ſhall relate one ſingle caſe particularly, as ſome uſeful hints may be collected from it, as well as from ſome other caſes of the like tendency, ſufficient, I hope, to lead the young practitioner into a method of diſtinguiſhing this diſorder from others, which, though in ſome appearances the ſame, are diametrically oppoſite.

Not long ſince I was deſired to viſit an elderly gentleman, labouring, as it was ſuppoſed, under an obſtinate *diarrhœa*. He was in the country, under the care of a very ſenſible and experienced apothecary, who, from the patient's and attendants complaints and informations, was induced to believe it a *diarrhœa*, and had treated it as ſuch, in a very proper manner.

The gentleman had very frequent motions to ſtool, and the motions extremely urgent. Some thin excrement was always diſcharged on theſe occaſions;

occaſions: the pains gradually leſſened for a time, and then returned with the like violence and the ſame effects.

Rhubarb, teſtacea, demulcents, anodynes, had been occaſionally given; but the diſorder ſtill continued, and the pains and diſcharges, though rather leſs frequent, ſeemed to be more violent. From the violence of theſe returns, I began to ſuſpect they proceeded from ſome obſtruction in the *rectum*. The pains were previous to the diſcharge; a *teneſmus* always ſucceeds it. On enquiry, I found my patient was always diſpoſed to be coſtive; that he had been ſo many days preceding this diſeaſe; that he had not paſſed a figured ſtool of a fortnight: I gueſſed therefore, that the diſcharge of thin excrement was forced by the painful throws paſt the obſtructing collection.

I requeſted the apothecary's ſervant, who was in waiting, to dip his finger in oil, introduce it into the *rectum*, and try to diſcover if my ſuſpicions were well-founded; and if they were, to endeavour to break the hardened *ſcybala*, and bring them away, either by his finger, or a narrow ſpoon, the beſt inſtrument we could then find.

It proved as I had ſuſpected, and the young man performed his part ſo well as to bring away a very large lump of hardened *fæces*, which could not by any other means have been diſcharged. Emollient clyſters, and oily relaxing draughts, ſoon brought away the reſt, and our

patient was effectually relieved from that moment.

Another caſe, not altogether diſſimilar, may be worth mentioning. I was deſired to viſit a gentlewoman near ſixty years of age, of a conſtitution rather plethoric, and, to appearance, healthy, except from the effects of the preſent indiſpoſition. She complained of very ſharp, but intermitting pains of all the parts about the *pelvis*. She compared them to labour-pains in reſpect of violence, but of longer duration; juſt, ſhe ſaid, as if the womb, bladder, and all within her, were forcing outwards: every half hour almoſt they returned, and had ſo continued near a month before I was called to her.

An ingenious apothecary, converſant in midwifery, had ſuſpected that ſome hardened *fæces* in the *rectum* increaſed the malady, if they were not the ſole cauſe of it. He was permitted to examine; but, by introducing the finger as high as poſſible, he could diſcover nothing of this kind, but found the *uterus* much enlarged and very hard, compreſſing the *rectum* in ſuch a manner as to prevent any thing but what was in a very liquid ſtate from paſſing, and ſuch kind of liquid ſtools were diſcharged very frequently, ſo as to imitate a genuine *diarrhœa*.

The *uterus*, when examined, was exquiſitely painful to the touch. The urine was diſcharged with much difficulty, owing, as it was ſuppoſed, to the increaſed bulk of the *uterus*.

Upon enquiry, I found the kind of pain was

ſuch as is above deſcribed. That the ſtools were always liquid, and theſe only forced away by pretty active purgatives, gentle ones having no effect, which never failed, at the ſame time, to increaſe theſe forcing pains immoderately. This had rendered the uſe of anodynes neceſſary at night, to allay the irritation produced by the purgatives.

Though from the account given me, there was much reaſon to apprehend the *uterus* was in a very morbid ſtate, probably verging to a cancer, as ſeemed afterwards to be more evidently the caſe; yet that ſome hard *fæces* might be one cauſe of the preſent pain, ſeemed to me not improbable.

The apothecary, at my requeſt, examined the *rectum* again with his finger; but found no *fæces*. He then introduced a ſmall tallow candle, and puſhed it gently paſt the compreſſed part. Upon drawing it out, he obſerved ſome excrement ſticking to it. This induced him to paſs it again to the obſtructing place, and, by degrees, he diſlodged a very large maſs of hardened excrement, which fell into the *rectum*, and being there broke with the finger and the ſcoop, was extracted. An emollient clyſter brought away the reſt, and ſhe now complained of nothing but fatigue and ſoreneſs.

Gentle laxatives now took effect, and her ſufferings were greatly diminiſhed. Thoſe ariſing from the morbid *uterus*, nevertheleſs, continued, as I was informed afterwards.

An opinion that purgative, or even laxative medicines deſtroy, or, in ſome degree, fruſtrate the efficacy of the bark, has contributed not a little to produce many troubleſome accidents of this kind: for, as a large quantity of bark is generally uſed in the cure of an ague, and as the bark is indiſſoluble in the ſtomach and bowels, it eaſily unites with the *fæces*, and forms with them ſuch large, hard, compact *ſcybala*, as can by no means paſs the *ſphincter ani*, without exquiſite pain and difficulty, and ſometimes not without the aid of inſtruments.

When this is the caſe, the patient complains of excruciating forcing pains about the *anus*; but remitting. Some thin excrement is diſcharged, and the pain abates. A freſh ſpaſmodic effort follows, and with the like ſucceſs. It is a kind of ſpontaneous ſpaſm of all the parts in, or connected immediately with the *pelvis*, for the excluſion of this irritating ſubſtance. Should ſuch a thin diſcharge, attended with pain, lead any one to ſuppoſe it a *diarrhœa*, and, in conſequence of ſuch a ſuppoſition, treat it with aſtringents and opiates, it is evident that greater miſchief would enſue.

Should the deſcription given by the patient, and the preceding circumſtances of the caſe, induce one to doubt whether the diſeaſe is owing to conſtipation, a trial attended with no danger, and, in moſt caſes, with little difficulty, will ſoon clear up the matter. If the pain remits, and returns with violence after a ſhort remiſſion, and the

the patient has either taken the bark, or been long coſtive, there is reaſon to apprehend the complaints are the conſequences of conſtipation, and can probably be relieved by no other means ſo ſafely and ſpeedily, as by manual operation.

But it appears, that a ſearch with the finger only, is not in all caſes ſufficient: the lodgment may be above its reach. A ſmall tallow candle may be paſſed ſo far as to put the affair out of doubt, and ſhould be recommended where, from concurrent evidence, ſuch a lodgment is ſuſpected.

SOME

SOME REMARKS

ON THE

BILLS of MORTALITY in *LONDON*,

WITH

An ACCOUNT of a late Attempt to eſtabliſh an ANNUAL BILL for this Nation *.

To the Medical Society.

December 30, 1768.

Gentlemen,

THE clerk of the pariſh in which I reſide, having left at my houſe, the other day, the yearly bill of mortality for London, I peruſed it immediately with ſome attention.

If the following hiſtory and reflections relative to this ſubject, fall within the compaſs of your deſign, you may publiſh them if you pleaſe: and although they come from a nameleſs writer, you may be ſatisfied of the truth of the facts, by applying to your ſecretary, who will be informed from whom he received this communication.

About the year 1754, a phyſician in the city, who had for ſome time employed a part of his

* Medical Obſervations and Inquiries, vol. iv. p. 214.

time

time in obſerving the ſtate of the weather, the concomitant diſeaſes, and taken ſome account of the weekly bills, applied to the Company of Pariſh-clerks in London, and acquainted them, that to his certain knowledge, their weekly bills were defective in many reſpects; that the liſt of diſeaſes was a very injudicious one; that their preſent labours, therefore, anſwered very little uſeful purpoſe, either to themſelves or the community: however, that it ſeemed practicable to form a plan that would alike conduce to the advantage of their Company, and to the intereſt and ſatisfaction of the nation in general.

A memorial on this ſubject was delivered to the Company in form, ſetting forth the particular benefits hence to be expected. That in reſpect to medicine, the increaſe or decreaſe of certain diſeaſes, at different times and places, would be both aſcertained, not only in this city, but throughout the kingdom; from whence much benefit might be derived to the art of healing, as well as to the public.

That the increaſe or decreaſe of the people in general would be aſcertained; in time likewiſe their numbers.

That the increaſe of vice or virtue might alſo be traced, by obſerving what proportion the diſeaſes proceeding from intemperance annually bore to the reſt; and likewiſe in what particular places this was obſervable.

That the firmeſt baſis of political arithmetic might be raiſed on this foundation: and that a work

work of extreme utility, on ſo many accounts, could not but redound to the benefit of thoſe who had the conduct of it.

The Company, on conſidering the affair, thought the propoſal of ſo much conſequence, as to apply to parliament for powers ſufficient to carry this deſign into execution.

The baſis of this plan was, that not only the pariſhes within the bills of mortality, but all the pariſhes in England, ſhould be obliged to keep exact regiſters of BIRTHS, BURIALS, and MARRIAGES, inſtead of *chriſtenings* and *burials* only, as the bills are at preſent. And that from the ſeveral pariſh regiſters, an annual regiſter ſhould be formed in each county, and tranſmitted to the capital, early enough to be incorporated into one general bill.

In order to render that part of this account which related to diſeaſes more advantageous, ſome phyſicians of eminence met together, and attentively conſidered the preſent liſt of diſtempers, rejected all ſynonymous and obſolete terms, and propoſed to give ſuch an explanation of thoſe that were retained, as might enable thoſe whoſe duty it might become to make report, to do it with much more preciſion than it has been done hitherto.

The affair was brought into parliament, and the bill was ordered to be printed, and ſeemed to be in a way to paſs very favourably.

Unfortunately, however, the gentleman * who

* The late Thomas Potter, Eſq.

undertook

undertook the conduct of this affair in the Houſe of Commons, inſiſted on a clauſe being inſerted in the bill which totally overthrew the deſign, and was the principal cauſe of its being rejected by a great majority.

One motive that was urged by thoſe who were friends to the bill was, that it would furniſh the moſt perfect baſis yet extant for political calculations reſpecting inſurances on lives, and other circumſtances of apparent utility.

It was evident, that could the number of people be known, the foundation of ſuch computations would be laid more ſpeedily and certainly.

This induced the gentleman above mentioned, to inſiſt on a clauſe for numbering the people of both ſexes and all ages, before the act took place. Thoſe who were not the friends of adminiſtration at that time, laid hold of this clauſe; and nothing but the *ſin of David* was heard of, till the bill was laid aſide.

All this, perhaps, you will ſay, is little to the purpoſe of medical knowledge; but indulge me a few moments longer, and ſhould you ſtill be of the ſame opinion, I ſhall ceaſe to urge your admitting theſe remarks.

I know of nothing that would more effectually conduce to ſtate the different degrees of healthineſs or unhealthineſs in the different parts of this nation ſo clearly, as a proper bill of mortality; nor ſuggeſt the neceſſity, nor perhaps the means of ſecuring the firſt, or preventing the latter.

latter. The records of the ſeaſons, in reſpect to heat and cold, dryneſs and moiſture, made by ingenious men in different parts of the kingdom, compared with ſuch annual bills, would afford many uſeful reflections to the faculty, much benefit to the community in general.

I have, therefore, thought it not improper to relate what ſteps have been taken in this affair, and by what means they were rendered ineffectual. Another ſeaſon may be more propitious; and ſhould you, gentlemen, approve the plan, your opinion, and aſſiſtance, I am perſuaded, would inſure ſucceſs.

Perhaps it will excite you the more readily to embark in this affair, when you recollect, that our country ſuffers much in the eſteem of foreigners by a grievous neglect in compoſing the preſent bills of mortality. If you will pleaſe to caſt an eye upon the article of *conſumption* in the yearly bill, you will perceive, that in the preſent year, no leſs than 4,379 out of 23,639 are ſaid to have died of this diſeaſe. From whence foreigners conclude, that the climate is ſo much diſpoſed to produce conſumptions, that it may juſtly be called unhealthy; a character it by no means deſerves.

You know that theſe bills are framed from the reports of common ſearchers appointed to view the dead bodies, in order to prevent the concealment of violence. Theſe ſearchers are, for the moſt part, ignorant poor women, who, if they

they ſee the body emaciated, immediately enter it in their report as conſumption. I need not inform you, how many chronic as well as long-continued acute diſeaſes, in which the lungs are no otherwiſe affected than as ſuffering with all the other parts, waſte the whole frame, and bring it to the ſame ſtate as thoſe who died tabid; but theſe ought not to be ranked under conſumptions, but under the ſeveral heads to which they belong.

It was intended, among other ſalutary attempts, to reſcue our country from theſe unjuſt imputations, and to vindicate its character from the effects of ignorance and inattention. That many die of conſumptions is moſt certain; but by no means in the proportion alledged by theſe erroneous accounts. Perhaps the real number of thoſe who die of the genuine *phthiſis pulmonalis*, would not amount to a third part of the ſum, oppoſite to the article of conſumptions. I have been preſent where the reports of ſome of theſe common ſearchers have been produced, and know, that perſons who have died of mere old age, have been reported conſumptions. Children, waſted by glandular diſeaſes, without the leaſt ſymptom of a pulmonary affection, have been placed in the ſame catalogue, and others yet ſtill more remote from a genuine conſumption, have been added to the liſt.

Theſe remarks, I acknowledge, do not directly tend to the cure of any diſeaſe, your immediate

mediate object; yet, as your observations, I find, are in the hands of many learned men abroad, these hints may tend to correct an error relating to the history of our climate, which has to our cost been received, if I am not misinformed, by many ingenious foreigners, and propagated in their writings to our disadvantage.

I am, &c.

REMARKS

ON THE USE OF

BALSAMS

IN THE CURE OF CONSUMPTIONS*.

To the Medical Society in London.

Gentlemen,

SO much has already been ſaid by different Authors on the ſubject of conſumptions, and the hiſtory, progreſs, and uſual methods of treatment, are ſo well known, that it may ſeem almoſt preſumption to offer any remarks to you upon this diſeaſe. And indeed ſome apology may be neceſſary, when I acquaint you, that I have no new method of cure to propoſe, nothing, I fear, that will conduce more effectually to the relief of this diſtemper, than the remedies you are already acquainted with. My view in ſubmitting theſe remarks to your conſideration, and, if not diſapproved by you, to the pub-

* Medical Obſervations and Inquiries, vol. iv. p. 231. Read October 16, 1769.

lic, chiefly aims at preventing inconveniences that may ariſe to conſumptive patients by the uſe of ſome medicines vulgarly applied to the cure of pulmonary diſeaſes, and which, under certain circumſtances, are not only unſuitable, but frequently injurious.

An idea that all balſams are healing, and that in all ulcers, not excepting thoſe of the lungs, they are indicated, has ſo greatly prevailed, that to doubt of its propriety, would ſeem to betray a want of phyſical knowledge. Yet I cannot but ſuſpect, nay, more than ſuſpect, that this idea has been the means of precipitating too many of theſe unhappy invalids prematurely to their grave.

The term *balſamic*, I own, includes a vaſt variety of different ſubſtances. A ſolution of *ſperma ceti*, nay, ſometimes oil mixed with water by the means of a mucilage, is ſtiled by ſome a balſamic, as well as a ſolution of balſam of *Peru*, *Copaivi*, *olibanum*, and other heating reſinous bodies: but there is a vaſt difference between theſe. The former, if free from rancidity, are properly emulſions, and antacrid. The latter are literally balſamics, all of which are more or leſs pungent and acrimonious. Let us juſt take a view of the principal articles of this kind in the *Materia Medica*, as they are ranged in the *Pharmacopœia*. They are chiefly the following: *Balſamum Copaiva,---Peruvianum,---Tolutanum,---benzoinum,---gummi ammoniacum,---myrrha,---olibanum,---opobalſamum,---ſtyrax,---terebinthina.*

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The officinal preparations are, *balſamum Locatelli*, --- *ſulphuris*, --- *terebinthinæ*, --- *traumaticum*. Some others I may perhaps have overlooked, but, excepting the *guaiacum*, *maſtiche*, and *balſamum guaiacicum*, I think I have ſeen, at one time or other, all the reſt made uſe of, and in full doſes, in the cure of conſumptive diſeaſes, where, if it was not evident, there was at leaſt ſtrong reaſon to ſuſpect the lungs were ulcerated.

For the ſenſible qualities of theſe ſubſtances, I ſhall appeal to Dr. Lewis's Hiſtory of the *Materia Medica*, and to the ſubſtances themſelves, and from thence endeavour to point out the effects they are moſt likely to produce on the human body.

Balſamum Copaiva, ſays Dr. Lewis, has a bitteriſh biting taſte, not very intenſe, but durable in the mouth; and quotes Fuller as aſſerting it to be manifeſtly warm and bitter; and that it purges when taken in a large doſe, *viz.* two or three drachms. This medicine, however, Fuller recommends in dry deep coughs, coughing up of blood and pus.

Balſamum Peruvianum, of a very hot pungent taſte: it is one of the hotteſt of the natural balſams.

Balſamum Tolutanum has an agreeable warm ſweetiſh taſte, very ſlightly pungent, and not accompanied, like that of moſt of the other balſams, with any nauſeous reliſh.

Benzoin has very little taſte, impreſſing on the

palate only a ſlight ſweetneſs: it imparts by digeſtion to water, a ſlight pungency.

Ammoniacum has a nauſeous ſweetiſh taſte, which is followed by a bitter one.

Myrrha; a lightly pungent, and very bitter taſte; nauſeous on the palate.

Olibanum; a bitteriſh and ſomewhat pungent taſte.

Opobalſamum; a bitter, acrid, aſtringent taſte.

Styrax; of a mild taſte, of no great heat or pungency.

Terebinthina Chia; of a warm pungent bitteriſh taſte.---All the turpentines are hot, ſtimulating corroborants or detergents. So far Dr. Lewis.

Balſamum Locatelli is compoſed of oil, two parts; turpentine and wax, each one part: it participates therefore of the qualities of the turpentine increaſed by heat. The red ſanders only give it colour, and ſome little ſmell.

Balſamum ſulphuris is a pungent acrimonious liquor, if made from ſulphur only; but when it is made either with oil of aniſe-ſeeds or turpentine, the heat and acrimony are much increaſed.

Balſamum traumaticum is a tincture of *benzoin*, *ſtyrax*, *balſam* of *Tolu*, and *ſocotorine aloes* in ſpirits of wine. From the nature of the ingredients and the *menſtruum*, it is evidently heating.

An opinion ſeems to have prevailed amongſt mankind univerſally, that theſe kinds of gummi-reſinous ſubſtances applied externally, promoted the

the healing of wounds and ulcers without exception. They early found, that it was neceſſary, in order to heal, to defend the parts affected from the external air; that the juices of plants alone, were inſufficient to form a plaſtic body; that unctuous applications eaſily melted; but that theſe tenacious yet pliant bodies afforded the moſt laſting defence. By degrees they apprehended that each balſam was endued with diſtinct properties. Hence they began to form numerous compoſitions, plaſters, balſams, ointments, without end; which a more enlightened ſurgery has at length greatly diminiſhed.

Remedies which appeared to aſſiſt in healing wounds externally, were ſoon apprehended to have ſimilar effects internally adminiſtered, in diſeaſes proceeding from, or attended with ulcerations, or in wounds of any internal parts: and this apprehenſion ſeems to have introduced theſe and many other ſubſtances, ſuppoſed to be poſſeſſed of balſamic qualities, into the train of phthiſical remedies, in all degtees and all conditions of the diſtemper. That this is the fact, I doubt not but you are, from your own obſervations, very fully convinced.

It will be neceſſary to examine with what propriety theſe ideas have been adopted. Let us begin with obſerving what effects theſe medicines have when applied externally; trace them cautiouſly in internal application; and then endeavour to judge impartially of their real virtues.

Balſamics and vulneraries are nearly allied, in

our conceptions of these bodies. Substances that warm and stimulate the solids, and prevent a tendency to putrescency in the juices. A little heat, some small stypticity, something agglutinant, must all concur. And these are mostly united in the balsams; some containing more, some less, of these respective properties.

If, in an inflamed state of an ulcer, in a young and vigorous constitution, a warm stimulating gummy-resin is applied, pain, heat, inflammation will ensue, fluxion to the pained part will be great, a very considerable discharge will follow, consisting of the juices emitted from the wounded vessels, and the vessels themselves dissolved by heat and putrescence. If these are excessive, the detriment to the sick will be in proportion to the degree of the discharge and the part affected. The same medicines applied to a cold, serous, phlegmatical habit, in an advanced age, will be just sufficient perhaps to produce such effects as would be deemed perfectly salutary; that is, bring on a proper digestion, the foundation of a perfect cure.

In properly tempering the heat and stimulating qualities of balsamic applications, and adjusting them to the age, habit, and qualities of the patient, consists no small part of the skill necessary in this part of surgery; as I believe will be allowed by the most experienced of that faculty.

Supposing that these remedies have similar effects when internally exhibited, what are physi-

cians

cians to expect from medicines endued with theſe properties in ulcerations of the lungs?

If they may be ſuppoſed to paſs the ſtomach, and other offices of digeſtion, unaltered, will they not produce the like effects? Certainly they will. They will ſtimulate; and this, in a great degree, in proportion to their ſenſible qualities: for we know of very few ſubſtances that diſcover much activity on the organs of ſmell and taſte, which do not quicken the pulſe; and whatever quickens the pulſe, occaſions a quicker tranſit of the blood through the lungs; and conſequently, the motion of this organ is more frequently reiterated.

If the medicine can be ſuppoſed to have any ſpecific effect on the diſeaſed part, it muſt be to produce the effects already enumerated. If the ſubject is young and vigorous, the diſcharge of fluids, and diſſolution of the ſolids, will be in proportion to the activity and heat of the medicine, and the temperament of the ſufferer.

I am not more averſe to ſpeculative diſquiſitions, which have only for their object the eſtabliſhment of an opinion, than you are. But I perſuade myſelf you will have patience with me in theſe reſearches. It requires perhaps much more abilities than I am maſter of, to eradicate even a trifling error once received: but this I think of ſome magnitude.

It ſeems not improbable, but that an opinion of ſome healing qualities reſident in this claſs of medicines, may have been ſtrongly impreſſed on

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the minds of many perſons who practiſe phyſic, from the injudicious encomiums given of many ſuch kind of drugs and compoſitions, by ſome of the Diſpenſatory writers. Fuller's commendation of the balſam of *Copaivi* in ſuch a tendency to inflammation, as muſt certainly accompany a dry deep cough, or coughing up of blood and pus, muſt undoubtedly have made ſuch impreſſions, and may ſerve as one inſtance, among many others that might be adduced, of the dangerous tendency of indiſcriminate praiſe. I do not produce this inſtance of Fuller's mentioned by Dr. Lewis, as including this gentleman in the cenſure. Dr. Lewis produces it only as Fuller's doctrine, which moſt certainly deſerves reprehenſion; as a medicine ſo pungent and heating cannot be ſuppoſed ſafe, much leſs beneficial, in a diſeaſe that requires a very different treatment.

From an attentive conſideration of the manner in which this claſs of medicines has probably been introduced into the cure of pulmonary diſeaſes, it ſeems to me, that an opinion of their virtues and efficacy in healing external wounds and ulcers, opened a way for their admiſſion internally for ſimilar purpoſes; but how well or ill this opinion is founded, that medicines capable of heating, ſtimulating, quickening the pulſe, are likely to abate heat, and leſſen irritation, upon which the healing of all internal ulcers greatly depends, I think will appear from the preceding remarks.

And

And if we take a conciſe view of the riſe and progreſs of the *phthiſis pulmonalis*, we ſhall perhaps be more confirmed in our ſentiments, that all medicines poſſeſſed of heating ſtimulating qualities, are in general improper in the treatment of it.

This diſeaſe, for the moſt part, takes its riſe from ſome accidental cold occaſioning a cough. This cough neglected, by its frequency and force confirms the inflammatory tendency that firſt ſeized ſome particular point of the lungs. Theſe ſymptoms being neither attended with pain, much fever, or loſs of appetite or ſtrength at firſt, are ſtill farther neglected, till by their violence, ſome portion of the lungs is ſo far affected, as to become unfit for the uſe of circulation; the inflamed veſſels being either diſſolved into pus, or forming with the juices they contain a *ſchirrhus*, or other immoveable obſtruction.

If this obſtruction is ſmall, perhaps it remains without much increaſe, if proper care is taken, during the patient's life. If it is large, and a conſiderable portion of the lungs is affected, the diſeaſe is every moment increaſed, whether it be inflammation tending to ſuppuration, or to form a ſchirrhous hardneſs, and thereby rendering a portion of the lungs impervious: for as the ſame quantity of blood muſt neceſſarily paſs through the lungs, now a part is obſtructed, as was wont to do in time of health through the whole, it is eaſy to conceive, that the action and reaction of

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the fluids and ſolids muſt be increaſed more than conſiſts with the ſafety of this organ; and this in proportion to the extent and ſituation of the part affected.

And hence in part proceed thoſe fluſhings in the cheeks, that heat in the palms of the hands, or feet, or both, which are generally perceptible in conſumptive perſons, in the early periods of this diſtemper; and which accompany them throughout, only as they ſeem at length obliterated by more grievous ſufferings.

I omit to take notice of the many other cauſes that produce conſumptions: for when once a ſingle point of the lungs is obſtructed, or the ſmalleſt ulcer formed, the diſeaſe becomes alike formidable, the age and habit of the patient, and the degree of inflammation or ulceration being the ſame, whatever may be the cauſe.

If then, from the firſt beginning of this diſeaſe to its concluſion, the *momentum* of the blood in the lungs becomes greater in proportion to the obſtruction, and that the effect of this increaſed *momentum* is an increaſe of the obſtruction; and as the medicines above mentioned have a tendency, ſome more ſome leſs, according to their different degrees of activity, to increaſe this *momentum*, ought we not to be extremely diffident in applying them in ſuch caſes, by whatever authority they are recommended?

Perhaps it will be alledged, that Balſams, in certain ſtages of this diſeaſe, eſpecially where there is a manifeſt ulceration, and great quanti-

ties

cies of pus are formed, muſt be of uſe as antiſeptics. I will not deny but they may be poſſeſſed of this property, as moſt heating aromatics and bitters ſeem to be. But ſuppoſing the whole of this antiſeptic efficacy could be conveyed unimpaired to the part affected, through all the changes they are liable to in the courſe of digeſtion, ſtill they would be active ſtimulants; and, whatever effect they might have on the juices, would ſtimulate the ſolids to more frequent and injurious contractions.

It is moſt probable, however, that much of this heating quality is expended before it reaches the part affected; whilſt it is evident, that moſt, if not all the ſtimulating tribe of medicines, whatever effect they produce on certain parts, as the *cantharides* on the urinary paſſages; yet exert a part of their active qualities on the nerves near which they paſs, ſo as in ſome degree to accelerate the motion of the blood.

Should it be farther alledged, that reaſoning is in vain where many facts, much authority, and general uſage, are againſt me, I admit the full force of this allegation; and allow that many facts as ſtrong as Fuller's may perhaps be produced. But as I well know the difficulty of aſcertaining the effect of any medicine by juſt experiments, I cannot but doubt at leaſt of the inferences, when my own ſenſes and diſpaſſionate reaſoning are againſt them. I am not unacquainted with the influence of general prejudice, nor with the difficulties that oppoſe themſelves to us, in endeavouring

deavouring to ſurmount them. Early prepoſſeſſions, confirmed by general conformity of opinion, in favour of balſams, cannot ſoon be changed or eradicated.

All that I hope for from this eſſay, is, to put young practitioners upon their guard in reſpect to theſe kind of medicines in the treatment of conſumptions. I think I have ſeen much detriment ariſing from them, and very ſeldom any benefit. I believe the practice was firſt adopted on miſtaken principles, and followed too generally without conſideration. And it ſeems not improbable, but the ancient practice of embalming, which is ſuppoſed to have been principally performed by the means of balſams, may have contributed not a little towards eſtabliſhing a general prepoſſeſſion in their favour; and that many might infer, from their efficacy in preſerving dead bodies, they were endued with properties capable of preventing the corruption or decay of the living.

REMARKS

REMARKS

ON THE

CURE OF CONSUMPTIONS*.

To the Medical Society in London.

Gentlemen,

IN a former paper, I ſuggeſted ſome doubts I had entertained reſpecting the uſe of balſamic medicines, ſtrictly ſo called, in the cure of conſumptions, and offered ſome conjectures in regard to their firſt introduction into internal uſe, and their application to pulmonary diſeaſes in particular. Upon the whole, I am ſtill of opinion, that their uſeful efficacy in theſe diſorders is much to be ſuſpected, and that an indiſcriminate uſe of medicaments of this claſs, has rather a tendency to increaſe than mitigate the ſymptoms attending a genuine *phthiſis pulmonalis*.

Whilſt I am endeavouring to excite ſuſpicions againſt what appear to me the *lædentia* in this

* Medical Obſervations and Inquiries, vol. iv. p. 289. Read June 11, 1770.

diſtemper,

diſtemper, I ſhould think myſelf fortunate, could the review of ſeveral years experience afford any uſeful hints to thoſe whom I wiſh to aid, and to whom theſe remarks are particularly addreſſed, the young practitioners.

When we conſider the ſtructure of the lungs, the tenderneſs of their fabric, the multitude of veſſels of which they conſiſt, the importance of their uſe, the many accidents they are unavoidably expoſed to, and, in compariſon of many other parts, their inſenſibility to immediate leſion, we ſhall be much more ſurpriſed there are ſo few perſons die of conſumptions, great as the number may ſeemingly appear*, than that ſo many periſh by this diſtemper.

To enumerate all the cauſes that are capable of producing a *phthiſis pulmonalis*, is not my intention; but to point out the neceſſity of attending to its commencement, in order to prevent its progreſs. The meaſles, and other inflammatory diſeaſes of the breaſt, to which children, as well as others, are expoſed, often lay the foundation of conſumptions: ſo likewiſe will colds, the ſuppreſſion of ſome ſalutary diſcharge, ſcro-

* In this city the weekly bills are ſuppoſed to exhibit a tolerably exact account of thoſe who die of the reſpective diſeaſes mentioned in that liſt. But I am informed, that the article of Conſumptions includes generally all thoſe who die of any lingering diſeaſe, and are much emaciated; by which the liſt is vaſtly enlarged beyond what it ought to be, to the reproach of our country; foreigners imagining that this diſeaſe is much more frequent amongſt us, than it is in reality.

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phulous and venereal affections, and many other cauſes, all which will operate more certainly and ſpeedily in bringing the diſtemper to a fatal concluſion, in proportion as a certain tenderneſs in the fabric of the lungs, an hereditary *tabes*, and other circumſtances, concur: for, to thoſe who are acquainted with the animal œconomy, it is rather a matter of wonder how the ſtrong and robuſt eſcape affections of the lungs, ſurrounded as we are with ſo many cauſes capable of producing theſe affections, than that perſons of a certain make, and particular delicacy of conſtitution, are ſo ſubject to pulmonary diſeaſes.

We cannot, I think, be too induſtrious in propagating the following doctrine: That the time at which a phyſician can be of moſt uſe in the cure of conſumptions, is at their firſt beginning. The ſlighteſt catarrhal defluxion ought not to be neglected, if it does not go off in a few days.

The beginning of moſt conſumptions is a cough, more or leſs violent. This cough is produced either by a thin ſaltiſh defluxion, irritating the membrane that lines the *trachea*, ſo as to bring on a general ſpaſm of all the parts, in order to diſlodge and diſcharge the irritating matter; or elſe, by an inflammation of ſome part of the lungs or *bronchiæ*, produced by one or other of the general cauſes of inflammation.

If the catarrhal cough is neglected, or is repeatedly increaſed by the cauſes that firſt pro-

duced it, this will be ſufficient to bring on an inflammation, which, if not removed, terminates in the uſual manner of inflammations; either by reſolution, in which caſe the lungs receive but little harm; or by ſuppuration, in which the miſchief, however ſmall at preſent, does not fail to be productive of laſting and injurious conſequences, proportioned to the extent of the injury, and the condition of the ſufferer, in reſpect to prediſponent cauſes.

If the inflammation terminates neither by reſolution nor ſuppuration, it often leaves a ſchirrhous hardneſs, whereby this particular part of the lungs, however ſmall and confined, becomes of little or no uſe in the œconomy of this organ; but by occaſioning an obſtruction of circulation and reſpiration in one ſingle point, ſubjects the ſound parts of the lungs to greater labour, as was before obſerved *.

From hence it is at leaſt evident, that the utmoſt care ſhould be taken at the commencement of this diſeaſe. The moſt trifling cough, if it continues, may either advance gradually till it ends in immediate miſchief, or may leave ſuch impreſſions as may ſubject the patient to perpetual returns: a cough therefore in children, or young perſons, or in perſons of a certain make at any time of life, ought ſpeedily to be cured.

Perhaps it will be needleſs to ſuggeſt the

* See a former paper on this ſubject.

means of doing this moſt ſafely: but there is one part of management neceſſary to be obſerved by thoſe who are about children thus affected, that cannot be too ſtrongly inſiſted on by the phyſician, and that is, the neceſſity of proper diet, proper likewiſe in reſpect to quantity. If ever an extreme attention to regimen is neceſſary, it moſt certainly is ſo to perſons affected with coughs, as will perhaps be more fully mentioned; but to children it is ſtill more ſo, both as they are greater ſufferers by improper diet, and have leſs command over their own appetite and inclinations.

For if a large quantity of the beſt chyle adds ſpeedily to the preſent ſtock of blood, as all muſt paſs through the lungs, this temporary increaſe of quantity will add to their irritation, the quantity itſelf being a *ſtimulus*. But if the chyle thus increaſed has not been properly digeſted, either on account of the quantity or kind of food, the miſchief will be greater. And this poſition will, I believe, be found uniformly true through every ſtage of pulmonary diſeaſes, and will evince the neceſſity of giving very explicit and peremptory orders in relation to diet, and the duty of thoſe who attend the ſick in this diſtemper.

I know, Gentlemen, that you, as well as myſelf, often have occaſion to look back at the fatal neglect, committed both by the ſick themſelves, as well as thoſe who ought to have had their future health more at heart. With what eaſe

would many of the moſt incurable conſumptive caſes have been prevented, or cured, at their firſt commencement? A perſon whoſe emaciated figure ſtrikes one with horror, his forehead covered with drops of ſweat, his cheeks painted with a livid crimſon, his eyes ſunk, all the little fat that raiſed them in their orbits, and every where elſe, being waſted; his pulſe quick and tremulous, his nails bending over the ends of his fingers, and the palms of his hands as dry as they are painfully hot to the touch; his breath offenſive, quick, and laborious; his cough inceſſant, ſcarce allowing him time to tell us, that ſome months ago he got a cold, but he knew not, perhaps, how he got it; he neglected it for this very reaſon, and neglected every means of aſſiſtance, till the miſchief was become incurable, and ſcarcely a hope left of palliation. You ſee multitudes of ſuch objects daily, and ſee them with a mixture of anger and compaſſion for their neglect and their ſufferings. Excuſe me for treſpaſſing in this manner on your time and your humanity. Though it is not in your power to prevent all theſe ſacrifices to ignorance and inattention; yet, if the faculty combine in prompting their fellow-citizens to neceſſary care, and prompt them to ſuffer no ſlight beginnings to paſs unregarded, however they may be acting againſt their own intereſt, they will have the ſatisfaction of contributing to the preſervation of many a uſeful life; for, perhaps, among thoſe who periſh by conſumptions, there are many

who, in reſpect to the excellencies both of body and mind, have given indications of becoming conſpicuous ornaments of humanity.

When a cough begins, if the patient is very young, let the quantity of diet, eſpecially ſolids, be leſſened; let the deficiency be made up with warm thin ſuppings; barley-water, milk and water, thin gruel, the lighteſt broths, ſuch things of this kind as the age and condition of the patient admit.

If there be much heat, or any pain in the breaſt, bleeding will be indiſpenſably neceſſary. The quantity to be taken away, and how often repeated, muſt be determined by the ſymptoms, the patient's age, habit, pulſe, and other circumſtances.

In reſpect to medicines, the moſt demulcent and cooling are indicated; and when the ſymptoms of inflammation are abated, gentle anodynes will be uſeful. Every thing of a heating, irritating nature, ſuch as the balſams, ſhould be avoided; and even the expreſſed oils of almonds and olives are often to be ſuſpected, and uſed with caution, as they are ſeldom totally free from ſome degree of rancidity, than which ſcarcely any thing is more irritating and diſguſtful. I have known the common doſes of *nitre*, the ſaline mixture, and other cooling ſalts, increaſe a cough by irritation; ſo that even theſe ſhould be adminiſtered, when neceſſary, rather in ſmall doſes, and frequently. The common

emulſion made with good freſh ſweet almonds, is a very proper vehicle for the ſeveral remedies indicated in this complaint; but if the almonds are not freſh, or are intermixed with the bitter, as is too frequently the caſe, they are injurious.

Freſh white poppy-ſeeds, in the proportion of half an ounce to a pint of Briſtol or pure water, make an excellent emulſion and unexceptionable; and theſe may be raiſed in any quantity both at home and in our own colonies.

If the thin copious defluxion leſſens, and the liquid grows thicker, and yet comes up without difficulty, the cough will abate, and gradually ceaſe entirely. It muſt depend upon the judgment of the preſcriber to know when and to what extent anodynes are to be uſed. I believe they are never ſafe at the beginning of a cough, till by proper methods the tendency to inflammation is firſt abated, except where the cough is altogether of the ſpaſmodic kind, as in ſome hyſteric caſes, or when it proceeds from acrimony heretofore diſcharged by an iſſue, an ulcer, or eroſions on the ſkin, and imprudently ſuppreſſed; or from gouty affections; in which caſes anodynes are undoubtedly of uſe: but in coughs ariſing from ſuppreſſed perſpiration, or an inflammatory diatheſis, as in the meaſles and epidemic conſtitutions, in ſuch caſes, anodynes are ſeldom to be allowed, unleſs it be to obtain a truce from temporary violence.

The miſchiefs that have proceeded from *Godfrey*'s

frey's cordial, *Bateman*'s drops, *Squire*'s elixir, and other heating anodynes, in the hands of ignorance, are ſcarcely to be enumerated.

When by a proper cooling regimen, and evacuations, the inflammation accompanying the cough is abated, then ſmall doſes of anodynes joined with the medicines above mentioned, to ſuch a quantity as to mitigate a fruitleſs, inceſſant cough, are very beneficial. If this firſt period has paſſed over without any attention paid to the diſorder, the cough becomes more harſh and dry; ſlight lancinating pains are now and then felt, darting, as it were, through the ſubſtance of the lungs, from ſome central point in the cavity of the *thorax*; commonly from under one of the breaſts, ſometimes exactly in the middle. A ſoreneſs is complained of, that is almoſt continually felt: this is augmented much by the cough, but not to ſuch a degree as the pleuritic ſtitches. It is not unuſual, under theſe circumſtances, to ſee the thin frothy phlegm, which is diſcharged by coughing, ſtreaked with blood; ſometimes a ſmall ſpoonful or two, or more, are coughed up at ſome certain time of the day. It is not often that much larger quantities are thrown up in this ſtate of the diſeaſe, unleſs the patient is very plethoric, or the fabric of the lungs extremely tender, or the cough is inceſſant.

The ſame indications point out a ſimilar proceſs, in reſpect to cure. To withdraw as much nouriſhment as can be done, without the riſk of ſuf-

fering from inanition; to ſupply the moſt cooling nouriſhment, and the moſt eaſily digeſted, in moderate quantities, and the more frequently; to bleed in ſmall quantities repeatedly; judging of this neceſſity not from the appearance of the blood alone, for this will often continue ſizy, till more is taken away than is compatible with the patient's ſituation in other reſpects. For if we leſſen the *vires vitæ* by inanition too much, a diſeaſe then takes place, which probably will increaſe our difficulty, that is, debility of the ſolids, and the conſequent vitiation of the fluids. The pulſe, the heat, the pain, cough, reſpiration, ſtrength and age of the patient, ſhould all be taken into conſideration. Many perſons live free from complaints with ſizy blood. The condition therefore of the blood ſingly ought not to determine us; we ſhould examine all the evidence.

It ſeems unneceſſary to ſpecify what I mean by light cooling nouriſhment: it may not however be improper to obſerve, that wine, or any other fermented ſpirituous liquors, are improper alone, and malt-liquor, however weak, ſeems very generally injurious; fleſh-meat, or indeed animal food of any kind, ſeems under theſe circumſtances improper. Spices of all kinds in any quantity, and indeed every thing poſſeſſed of much piquancy. Whey, either from goats or cows, milk, butter-milk, milk and water, light broths, and all the farinaceous preparations, are to be recommended, but ſtill remembering

bering to adviſe caution in reſpect to quantity. For if a larger quantity of the beſt-adapted nutriment is taken in at once than can be well digeſted, the chyle, ſo far from affording that bland and balmy fluid to the blood, that muſt qualify it for the offices of nutrition, communicates a ſharpneſs that defeats our expectations. It matters very little, both in this and many other diſeaſes, what quality the food is of, if the quantity likewiſe does not correſpond to the powers of digeſtion. I have not the leaſt doubt but this is likewiſe your opinion; and that you inforce it in your directions: but that this is the caſe with practitioners in general, may perhaps not be ſo certain.

Under ſuch a ſituation as is above deſcribed, the methods pointed out ſeldom fail to abate the fever and pain, lower the pulſe, and eaſe reſpiration; the diſcharge then becomes thicker, and the cough, inſtead of being violent and continual, juſt comes on when a quantity of well-digeſted phlegm ſolicits its diſcharge, and ſtep by ſtep uſual health returns.

To ſuch convaleſcents, one cannot but recommend the utmoſt diſcretion in reſpect to their conduct. A violent cold, a debauch, long confinement in populous cities, and other ſimilar cauſes, will ſoon bring back the ſame ſymptoms, which, if frequently repeated or neglected, bring on a more formidable diſtemper, from which if the patient recovers, he will have much to attribute to the ability of his phyſician.

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In the further progreſs of this diſtemper, medicines of a different claſs are found of advantage: the bark, elixir of vitriol, *Briſtol* and other waters, a total abſtinence from animal food, and other methods of treating conſumptive diſeaſes, have their uſes. Should you think theſe remarks not unworthy of your notice, I ſhall endeavour to collect ſuch further remarks as have occurred to me on this ſubject, and ſubmit them to your conſideration.

I am, &c.

FURTHER

FURTHER REMARKS

ON THE

TREATMENT of CONSUMPTIONS, &c*.

To the Medical Society in London.

Gentlemen,

IN the laſt volume of your Obſervations, you were pleaſed to admit ſome remarks on the uſe of reſinous medicines, employed in the cure of pulmonary conſumptions †, and which ſeemed, in my opinion, to be rather injurious than uſeful. I take the liberty to lay before you ſome further remarks on the treatment of this diſeaſe; rather propoſing to myſelf the prevention of harm, than contributing much to the cure of this very dangerous malady.

* Medical Obſervations and Inquiries, vol. v. p. 345. anno 1775.

† Theſe Eſſays, though inſerted in different volumes of the Medical Obſervations and Inquiries, are here collected together; the date of each Eſſay is annexed to the reſpective paper. *Editor.*

It

It was there pretty ſtrongly urged, and cannot well be too often repeated, that if this diſeaſe has continued till the lungs are affected to a certain degree, all hope of a cure is vain; a doubtful, and often ſhort-lived truce, is all that art can promiſe.

In this paper, I mean to ſubmit to your conſideration, and, if you do not diſapprove them, to that of the Public, ſome reflections on the more capital medicines employed in the cure of this diſtemper;---the bark---elixir of vitriol---repeated bleedings---veſicatories; not omitting Briſtol water, and change of air and climate; exerciſe; with ſuch other obſervations relative to this ſubject as have occurred to me.

With this view I ſhall chiefly attend to the effects I have obſerved: and if I have formed any opinions upon inſufficient ground, I ſhall be glad to be ſet to rights; as I think there can be ſcarcely any thing more injurious to ſociety, than to propagate wrong notions reſpecting the treatment of diſeaſes; as they may chance to lead the leſs experienced to a precipice with his patient, where one of them may loſe his life and the other his reputation.

Of late years the bark has been given ſo generally, and in caſes ſo remote from thoſe in which it was firſt uſed as a ſpecific, I mean intermittents of every ſpecies, that it is not to be wondered at, that it is often confided in, as a dernier reſort, in the pulmonary hectic.

The apparently regular paroxyſms of an intermittent,

mittent, ſo conſpicuous in certain ſtages of this diſeaſe---regular cold fits, ſucceeded by great heat, followed by copious ſweats---a ceſſation of every violent ſymptom enſuing, naturally draw the attention of the practitioner to a remedy, which, under like appearances, had afforded the moſt beneficial relief.

The bark has been puſhed, in this ſtage of the diſtemper, in too many inſtances, with as much vigour as is neceſſary to conquer the moſt genuine autumnal intermittent---till both the patient and preſcriber were weary of the proceſs---the patient loathing the remedy, and the preſcriber finding it ineffectual.

But this is not the worſt: the bark is ſo far from curing the hectic ariſing from diſtempered lungs, that, according to the beſt of my obſervation, it not only takes up that time, which might probably have been better employed in the uſe of other medicines, but, for the moſt part, it aggravates the diſeaſe beyond remedy.

I have ſeen the bark given in almoſt every ſtate of the *phthiſis pulmonalis*, even in the firſt commencement, whilſt the breaſt was in pain, the cough dry and harſh, the pulſe quick and hard, and the heat conſiderable. What was the conſequence? frequently an *hæmoptyſis*, and all its worſt attendants; ulcered lungs, purulent ſpitting, colliquation, and death.

I have ſeen it given in moſt of the ſubſequent ſtages, often indeed with leſs appearance of injury, but at leaſt without benefit.

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There are two cauſes of conſumptions, which often produce ſuch a ſimilarity of ſymptoms to the genuine *phthiſis*, as ſometimes to have led me to make uſe of the bark in apparent tendencies to a genuine pulmonary conſumption, with advantage; and I think they may not improperly claim ſome attention from practitioners.

One of the cauſes is, the ſuckling of children longer than is conſiſtent with the mother's ability. This caſe occurs not ſeldom, among the middling and lower claſs of females of naturally tender and delicate conſtitutions. Prompted by maternal fondneſs, or a wiſh to diſcharge a duty they think they owe to their offſpring, and ſometimes by narrow circumſtances, they give the breaſt to the child till their own ſtrength is impaired: in ſuch a ſtate of weakneſs, ſome ſlight cold brings on a cough; this is increaſed gradually, till it brings on the appearance, at length the reality, of the genuine pulmonary conſumption: here the bark given early, in moderate doſes, and merely as a tonic remedy, is often of excellent uſe. Many, I am ſatisfied, it has retrieved from deplorable ſituations; and under ſuch circumſtances a prudent trial may ſafely be made.

Another cauſe is, any weakening diſcharge, either from abſceſſes, or from the greater operations of ſurgery; or from a copious and conſtant *fluor albus*, or ſimilar enfeebling evacuations. That the bark is, for the moſt part, of uſe in theſe caſes, when the lungs are not inflamed, is indubitable;

indubitable; and if they are ſo affected, and not beyond a certain degree, it is alſo efficacious in preventing the progreſs of this malady.

In phthifical complaints, ſucceeding ſuch ſituations, a prudent trial of the bark ſeems neceſſary. Small doſes of the decoction, given either alone, or joined with the ſaline mixture, or ſuch other additions as the preſcriber may think proper, may be given: but if the breath becomes more tight and oppreſſed, the cough dry, the pulſe more quick and hard, and eſpecially if ſlight tranſitory pains or ſtitches about the *thorax* are more frequently complained of, a perſeverance in the uſe of the bark will increaſe the diſeaſe: and if ſuch ſhould be the appearances, in the progreſs of conſumptions, or ariſing from what cauſe ſoever, if the bark is accompanied with ſuch effects, it will be prudent to deſiſt from its uſe.

If, on the other hand, no pain, tightneſs, or oppreſſion, is perceived, and a manifeſt abatement of the ſymptoms appears, it will be right to proceed. But the exhibiting of this medicine requires a diſpaſſionate obſerver; and whoever wiſhes to make trial of it, ought neither to give it in the early inflammatory ſtate of this diſtemper; nor continue its uſe in any ſubſequent part of its progreſs, if it produces the effects above mentioned.

By its tonic virtues it will often enable nature to conquer many difficulties. I have ſeen it of uſe in promoting expectoration, where ſtrength

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was only wanting to perform it, toward the end of peripneumonic fevers; but that it ſtops this diſcharge, changes ſlight wandering pains into fixed ones, and increaſes them with all their conſequences, I have been a witneſs too often, to admit of the leaſt doubt, in a variety of caſes.

It would be treſpaſſing too much on your patience, to deſcend more minutely into the uſe and abuſe of this medicine, or the mode of exhibiting it; ſuffice it to ſay, that for the moſt part much harm or great good may be expected from it, and conſequently too cloſe an attention cannot well be paid to its operations by the preſcriber.

THE elixir of vitriol is often exhibited in conſumptive caſes, and may claim a conſideration in this place, and the more ſo as it ſeems to be frequently uſed with not leſs impropriety than the bark.

Perhaps a ſingle fact has contributed to raiſe the credit of this medicine in phthiſical caſes, without much regard to the ſtate of the diſeaſe, to a very injurious extent. It is ſaid that a perſon took, by miſtake, in a very advanced ſtate of a conſumption, at one doſe, half an ounce of the elixir of vitriol, inſtead of twenty-five drops, the doſe ordered by a juſtly-eminent phyſician (Sir Edward Hulſe), and that the patient not only

only ſurvived the enormous doſe, but was cured by it.

Medicines, it is well known, that are highly proper in one ſtage of a diſeaſe, are equally detrimental in another. I have ſeen the elixir of vitriol, in a competent doſe, given in the inflammatory part of this diſtemper, while the pulſe was quick and hard, the breathing difficult, the cough frequent, with much heat, and very little expectoration; the effect was, an increaſe of every ſymptom, a ſpitting of blood, and all its conſequences.

In the latter ſtages of this diſeaſe, when a general tendency to putrefaction takes place, it cools and checks this tendency; it reſtrains the colliquative ſweats, and, if the lungs are not injured paſt repair, it is a very uſeful auxiliary.

The compoſition, however, of this medicine, may, perhaps, be found ſomewhat exceptionable for the purpoſes intended; the mineral acid combined with ſpices, may ſeem to be the leaſt eligible. It is true, that aromatics are thought to poſſeſs an antiſeptic virtue; but where the putreſcence proceeds from matter continually mixed with the blood from broken veſſels, every thing irritating ſeems to be forbidden. Perhaps the *ſpiritus vitrioli*, in the tincture of roſes, or in any other proper vehicle, may be the moſt ſuitable method of exhibiting the mineral acid in ſuch diſeaſes.

Probably, there are very few medicines which do not undergo a conſiderable change in the ſto-

mach and offices of digeſtion; ſo that neither the ſuppoſed contractile tonic powers of the bark, nor the antiſeptic acid of the elixir, penetrates thoſe receſſes which are intended by the preſcriber to receive their efficacy. I ſuſpect that much good or harm is done by theſe medicines in the preſent caſe, by affecting the irritable parts of the ſtomach and firſt paſſages; and by this means I apprehend the bark oftener contributes to produce the ſymptoms we have complained of, than by its action on the lungs, the ſeat of the diſeaſe. If we increaſe for a time the tonic force of the heart, and conſequently the greater flow of blood through the lungs, we are increaſing the malady for which we preſcribe it, let the manner of effecting this be what it may.

The action of allum, when a little of it is diſſolved in the mouth, may perhaps lead to explain this matter. It ſoon occaſions a kind of thrill through the whole habit; by which it may perhaps contribute to ſuppreſs hemorrhages, to cure obſtinate tertians, and produce other ſalutary effects, by acting upon the ſolids only; and the mineral acid in the elixir may, in like manner, ſo affect the organs of taſte, and the nerves of the firſt paſſages, as probably to operate as powerfully in ſuppreſſing immoderate evacuations, by this means, as by any other we can conceive.

When, therefore, the veſſels act with ſufficient force, and are replete with juices; and when theſe

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ought to be prudently reduced, in order to give all poſſible eaſe to the lungs, and conciliate a repoſe to them, as much as is conſiſtent with their offices; it ſeems highly improper to give medicines which, let their *modus operandi* be what it may, are known to poſſeſs a power of invigorating, and are generally made uſe of in all caſes for that purpoſe. And as there are many ſituations in the progreſs of Conſumptions, in which medicines producing ſuch effects, cannot but be injurious; it will be always neceſſary to regard theſe ſituations with all poſſible attention.

Of the uſe of Briſtol-water in the cure of this diſtemper, ſo much has been ſaid and written, and ſuch are the diverſity of ſentiments concerning its efficacy, that it may ſeem to border upon raſhneſs to hazard an opinion concerning it. I ſhall ſuggeſt, however, the reſult of my own obſervations, and ſubmit moſt willingly to better information.

I have ſeen many perſons recover from pulmonary diſeaſes after drinking the Briſtol-water, whoſe cure ſeemed to be doubtful from any other proceſs; this circumſtance, added to its general reputation in phthiſical caſes, has been a ſufficient inducement to me to recommend a trial of this water in the early ſtages of phthiſical complaints.

And here I would wiſh again to inculcate this remark, that it is before the approaches to a confirmed phthiſis, that patients ought to repair to Briſtol; otherwiſe a journey thither will be,

not only without benefit, but will probably be detrimental.

Thoſe who can prevail upon their patients to go thither before the diſeaſe has affected the lungs, beyond a poſſibility of aſſiſtance from this or any other remedy, have often the ſatisfaction of ſeeing their patients return in good health; whilſt thoſe who delay the uſe of theſe waters to the laſt extremity, too often fall ſacrifices to their own irreſolution, and leave an impreſſion on the minds of others injurious to the water.

It may be ſaid, that the journey, a better air, change of ſituation, and of objects, have contributed to the patient's recovery: be it ſo; theſe circumſtances are all of them conducive to health in every chronic diſorder. Perhaps, in none more ſo than in that which is the ſubject of theſe remarks. But why ſhould it be ſuppoſed that the Briſtol-water has no ſhare in the recovery? Suppoſing the water to be void of any great efficacy, is it of no conſequence to phthiſical patients, to be obliged to be out of their rooms early in a morning, in the cool, freſh air? Are repeated draughts of a light tepid water, of no uſe in waſhing off impurities, allaying heats by mere dilution, and ſupplying the waſte of juices exhauſted by copious perſpiration? Hope itſelf is of vaſt moment in the cure of many diſeaſes; and it is perhaps not inconſiſtent with the duty we owe to our patients to promote it, whilſt we ourſelves retain a hope of their recovery.

But it ſeems to me that the water drank freſh

at the pump, actually contains principles conducive to the recovery of patients affected with phthiſical complaints. What theſe principles are, it may be difficult to define. The water ſeems to poſſeſs a ſlight calcareous ſtypticity, and perhaps the air it contains may alſo have an antiſeptic quality. In this place it may be enough to ſay, that I think the Briſtol-water an efficacious medicine, and that I have often found it of ſignal benefit to conſumptive patients.

Were the annals of the Hot Wells conſulted, it would appear, that thoſe records are againſt me. But whence does this ariſe? From two cauſes; firſt, from the patients themſelves, who, in theſe diſorders, being ſeldom apprehenſive of any danger, will not liſten to a preſcription which either thwarts their inclinations, or ſeems inconvenient. Secondly, from the phyſician too eaſily complying with theſe heſitations, and not urging the neceſſity of ſuch a journey, at a time when it might be advantageous. As the diſeaſe advances towards its laſt ſtages, then, perhaps, alarmed by their own fears, or the intreaties of their friends, they conſent to undertake a journey, which waſtes the ſmall remains of ſtrength they have, and brings to the Wells additional proofs of their inability to remove diſtempers totally incurable. Hence it is, that the opinion of the faculty is ſo much divided, in reſpect to the uſe of theſe waters.

Change of air is of much conſequence in all chronic diſeaſes of the lungs, ſometimes even

from good to bad. It is not ſeldom that we ſee aſthmatic perſons breathe more freely in the dampeſt confined parts of this metropolis, than in the country; at leaſt I have met with many ſuch inſtances. In conſumptive caſes, however, the air of all large cities is found by experience to be particularly injurious. Whence this ariſes, is in this place unneceſſary to explain; the fact is indiſputable. When the phyſician adviſes his patient to a change of air, to point out the moſt proper change becomes an important object.

In the neighbourhood of moſt great towns in England, as well as London, there are places which have acquired a reputation amongſt the inhabitants for the peculiar healthineſs of their ſituation. I will ſuppoſe theſe ſituations are well choſen; that the ſoil is dry; no ſtagnant waters in the neighbourhood; properly ventilated, yet not expoſed to the keen north-eaſt winds; where it will be eaſy to find ſheltered walks, rides, and every invitation to be abroad in fit weather, without hazard from wet and cold. Such, I believe, from the few places I know of this kind, are thoſe ſelected for the retreat of conſumptive patients, in the vicinage of large towns and cities. And here it may not be improper to take a general view of ſuch as are recommended for the like purpoſe, in the neighbourhood of London.

The town is ſurrounded, almoſt, by a ridge of eminences, incloſing, beſides the city, a low plain to the weſtward, of conſiderable extent;

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on the north, Highgate, Hampſtead, and Kenſington Gravel-pits; on the ſouth-eaſt, Blackheath, Clapham, and Putney. The ſummits of theſe may be called, comparatively, high ground, and are very much expoſed to the ſharp north-eaſt and eaſterly winds.

To direct our patients to any of theſe places, early in the ſpring, whilſt thoſe winds are for the moſt part as ſtationary as the trade-winds, ſeems to be expoſing them too much to an air that is very unfriendly to ſuch complaints.

The vales, eſpecially to the ſouth-eaſt and weſt of London, as Camberwell, Peckham, the lower parts of Clapham, the drier parts of Lambeth and Batterſea, Fulham, Chelſea, Brumpton, and Kenſington, and other ſheltered dry places about the town, would in the ſpring undoubtedly be the moſt proper.

As the more temperate ſeaſon advances, higher ſituations may be allowed; and it would ſeem as improper to ſend a conſumptive patient in ſummer to the low marſhy grounds on the banks of the Thames, amongſt the gardeners grounds at Batterſea, or at Fulham, abounding with the moſt putrid exhalations of manure and corrupting vegetables; as it would be to order them in winter to the top of Highgate or Hampſtead-hill, or the bleaker air of Blackheath. Iſlington, the general refuge of the city, would be leſs exceptionable, was it not quite open to the keeneſt north-eaſt winds in the ſpring; and in

ſummer to the ſmoke of the city, driven upon it by the ſoutherly winds.

Nor is it a matter perfectly indifferent whether we ſend our patients to the villages at the eaſt or weſt end of this metropolis, the ſouth or the north. The town itſelf is covered almoſt continually with an atmoſphere of ſmoke, embodied with other exhalations, ſo as to form a cloud more or leſs denſe, which is viſible at a great diſtance.

This vaſt body of ſmoke is ſeen to extend for ſeveral miles beyond the limits of the city and its ſuburbs, and is driven by the winds that prevail in the ſeveral ſeaſons, according to their direction. In the ſummer ſeaſon, for inſtance, whilſt the ſoutherly winds prevail, this denſe body is driven to the north and north-eaſt parts of the environs, and covers the herbage, the trees, and every thing, both living and dead, with black penetrating ſoot. In the winter and ſpring, while the northerly winds prevail, the oppoſite villages on the ſouth-weſt and weſt ſide of London receive this thick atmoſphere; but with this moſt remarkable difference, the winter winds paſſing through this warmed atmoſphere, loſe no ſmall part of their rigorous effects; they are ſoftened by it, and are proportionably leſs injurious to animals, and even to plants; for vegetation is much earlier in general to the ſouth and ſouth-weſt of London, than on the oppoſite extremities.

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I have ſeen the double-bloſſomed almond-tree in bloom at Chelſea, ſooner by twelve days at leaſt than any where to the north or eaſtward of the town in ſimilar ſituations. It ſeems therefore neceſſary to conſider the ſeaſon and ſituation, before we fix the abode of conſumptive patients: to whom it is not merely ſufficient to adviſe them to go into the country; they muſt be aſſiſted alſo to determine upon a proper place, and proper conduct whilſt they are there. They muſt have had but little experience, who are not perfectly ſatisfied, how little ought to be left to the diſcretion of the ſick, in moſt diſeaſes, to the conſumptive eſpecially, in reſpect to their conduct. I have known divers inſtances of perſons who have gone into the country, in conſequence of their phyſicians advice in ſuch caſes, and have had ſo little diſcretion, as to ſleep with the windows of their chambers purpoſely left open, for the benefit of the air, in the moſt inclement part of the ſpring. The conſequence was, that in a few nights the malady was increaſed beyond the power of art to relieve it. A phyſician, therefore, muſt deſcend to the minuteſt particulars in his directions.

If an attention to circumſtances like theſe is neceſſary, to enable us to determine upon the choice of a proper reſidence in our own neighbourhood; how much greater muſt be our difficulty, when we propoſe to them a migration to the continent of Europe!

But

But before I enter upon this ſubject, it may not be improper to ſuggeſt ſome hints, relative to the different parts of our own country.

Briſtol will naturally claim our attention, in the firſt inſtance, when change of air is recommended, as in the neighbourhood of that place there are two great advantages, the water, and a good air.

But if, from any particular diſlike, or other more ſubſtantial reaſon, this is not complied with, perhaps a journey would be much more advantageous than a fixed reſidence in any ſpot, however healthy. I ſhall only add, that a journey is always preferable to an equal number of miles rode over in one and the ſame tract of country.

In the ſpring, this journey ſhould be to the ſouthward; to the weſtern counties, or the ſea-coaſts:---and in the ſummer, to the northward, or to Wales;---the cooler parts of Great Britain:---Buxton or Matlock, or where any ſimilar water is to be met with, ſeems adviſeable. To meet the advancing ſpring, to return from the approaching winter, and by theſe means to avoid the ſeverity of cold, ſo injurious to tender breaſts, is the evident rule of conduct in ſuch caſes. If it requires ſome conſideration, a knowledge of places in detail in this country, nay, even in the environs of London, to determine with propriety on the choice of places for the retreat of invalids; what muſt be our difficulty, when

when called upon to fix the route and reſidence of a conſumptive patient, who ſeeks an aſylum on the continent!

And here I cannot but lament the want of an inſtitution, which, at no great national expence, might be attended with vaſt national advantages. Was a phyſician, or ſome medical perſon, to be placed in the ſuite of every Britiſh ambaſſador, envoy, or reſident, we ſhould ſoon be informed, and with ſome degree of certainty, of the proper places to which we might ſend our patients with the greateſt proſpect of ſucceſs. Neither the partial opinion of the patients who have reſided at different places, nor the tranſient viſits of the moſt obſerving travellers, nor even the obſervations of ingenious ſenſible phyſicians themſelves, without a longer reſidence in the place than falls to the lot of moſt of them, can enable us to judge with accuracy of their comparative advantages.

The ſouth of France, Italy, Portugal, (I mention them in the order they are uſually propoſed to us) are the places of general reſort.

Wherever the winter is ſhorteſt, the leaſt ſevere, and the leaſt changeable, every thing elſe being alike, that is the moſt adviſeable. To which may be added likewiſe, the place of the moſt eaſy acceſs. Thus, for inſtance, Portugal, by ſome, would be ſtrongly objected to, on account of the ſea-voyage; whilſt others, perhaps, would chuſe it for the ſake of this eaſy conveyance. But if there be juſt reaſon to give one place in the

the neighbourhood of London, and within the compaſs of a very few miles, the preference to another, the difficulty of giving advice in this caſe, with the preciſion we could wiſh, is too apparent; and it muſt remain ſo, till further obſervations enable us to form a better judgment on this ſubject.

Of all the places we are acquainted with, perhaps the iſland of Madeira enjoys the moſt equal temperature; but the voyage, and other circumſtances attending it, afford very formidable objections.

Nice has of late been the general retreat of the Engliſh conſumptive patients. Some places in the neighbourhood of Marſeilles are alſo well ſpoken of. The neighbourhood of Naples in Italy is alſo much commended; and in Portugal, the vicinage of Liſbon, and Cintra, a pleaſant ſpot, not far from that capital. In all theſe places regard ſhould be had to ſituation; that it may be dry, near no ſtagnant water, not environed with thick woods; where the water is good, and the air free, but not ſtormy and impetuous.

To thoſe who object to the continent, a trial of the weſtern counties of England may be properly recommended: ſhould it not prove ſalutary, the paſſage by ſea to Liſbon from thence is, for the moſt part, both ſafe and ſhort. Even ſea-ſickneſs is often beneficial to the conſumptive, as well as the ſea-air. Impaired digeſtion, and, not ſeldom, a redundancy of bile, attend

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theſe caſes; and perhaps repeated mild emetics, ſufficient to cleanſe the firſt paſſages, would often be of uſe.

One great misfortune attending theſe migrations, whether from London or other great cities, into the neighbouring country, or to Briſtol and other places in this kingdom, or to the continent, is, that, for the moſt part, they are undertaken too late, both in reſpect to the progreſs of the diſeaſe, and the ſeaſon.

Inſtead of removing at a time when a change of air and its conſequences might prevent the moſt ſerious evils, they are in haſte to quit their country, when perhaps neither this can be beneficial, nor the ſeaſon for a journey a proper one.

It ſeems too often to be the fate of conſumptive patients, to do that laſt, which they ought to have done firſt; and by this prepoſterous conduct, to ſhorten their own lives, and afflict all who have any regard for them. It happens not ſeldom, that when their phyſicians and their friends have in vain urged their departure at the proper ſeaſon, they have reſolved to ſet out on the moſt fatiguing journies in the depth of winter; by which they are expoſed to every kind of inconveniency and hardſhip: if they eſcape with life, they aggravate their diſeaſe, and too frequently die, in the journey, martyrs to their own indiſcretion.

The benefit of exerciſe in this diſtemper, has been ſtrongly urged by many writers. As it has been

been treated of ſo pertinently by Doctor Dickſon, one of your colleagues, I ſhall ſay little more on the ſubject. It is however evident, that this great auxiliary may be abuſed, and that conſumptive patients may uſe it improperly. They ride out when they ought not, and increaſe their diſeaſe through indiſcretion. Moderate journies, in temperate ſeaſons, and as much as may be on horſeback, are of excellent uſe in conſumptive caſes, obſerving, at the ſame time, exact temperance, both in reſpect to diet and liquors. To ride out early in the ſpring, in very ſharp, or in damp, cold, and foggy weather, and at unſeaſonable hours, as, early in the morning, or late at night, is moſt certainly prejudicial.

Repeated bleedings, in ſmall quantities, are conſidered in theſe caſes as highly advantageous. They are ſo; and yet it is poſſible to carry this point too far: a conſtitution apparently abounding with blood---the blood when emitted extremely ſizy --- much pain in the breaſt---and an abatement of every ſymptom enſuing, are juſt motives to proceed. In ſuch caſes bleeding is undoubtedly proper, and to be repeated ſo long as the like effects enſue, and health is reſtored.

But in very delicate conſtitutions, and where the pulſe may be quick, with ſome degree of fulneſs, and the blood laſt drawn conſiderably ſizy, it may not be of the like advantage.

I do not think the appearance of the blood, though it may ſeem to be much inflamed,

is alone a ſufficient reaſon for bleeding. All other evidence ſhould be called in, to aſſiſt us in determining upon it; the patient's age, ſtrength, habit, uſual evacuations, and ſtate of the diſeaſe. I mean only to ſuggeſt care; not to diſſuade from the operation: bleeding carried to exceſs, even in ſmall quantities, is capable of producing various ill conſequences.

It may not be improper in this place, perhaps, to take notice of a circumſtance which often happens in conſumptive caſes, and which as often claims the anxious attention of ſome of their friends.

It is well known that young delicate females, from the age of fifteen or ſixteen, and upwards, are often ſubject to this diſtemper. When it has advanced conſiderably, the *menſes*, if they have made their appearance, moſt generally ceaſe. This alarms their female friends, and they call upon the phyſician to uſe his utmoſt endeavours to aſſiſt in this point, believing this ceſſation to be the cauſe of the complaint. Induced by theſe ſolicitations, medicines have ſometimes been adminiſtered, that, without obtaining this end, have tended to aggravate the diſtemper. This deficiency is often of no real diſadvantage in theſe caſes: in many it would be injurious, by leſſening the ſtrength, which is already inſufficient for the purpoſes of life. Even ſmall bleedings, at the regular periods, have often done more harm than good. A ſudden ſuppreſſion may require bleeding; but when the evacuation

cuation fails through want of ſtrength and poverty of blood, it increaſes the diſeaſe.

Drains are alſo deemed to be of great uſe in the cure of diſorders of the breaſt. Iſſues, ſetons, bliſters, both temporary, and, as they are ſtyled, for want of a more juſt epithet, perpetual, are ſtrenuouſly recommended. I confeſs I have but little experience to allege, either for or againſt theſe kinds of applications: whilſt I pay great deference, not only to the experience of my brethren of the faculty, but even to their opinions, they will not wiſh me to give up my own implicitly.

It gives me ſome degree of firmneſs in proſecuting any meaſure, whilſt I can perceive ſome relation between the cauſe and the effect. When I diſcover that a phthiſical patient is deſcended from parents who have been ſubject to cutaneous or ſcrophulous diſeaſes, or that they have had the like themſelves; that ſome iſſue has been ſuddenly ſtopped; ſome eruption has diſappeared; and that the breaſt was ſoon after attacked; it ſeems immediately neceſſary to ſubſtitute an artificial drain, and, perhaps, as near to the part that was the ſeat of theſe diſorders, as conveniency will permit. I believe it happens not ſeldom, that very dangerous attacks upon the breaſt are made by the retroceſſion of ſuch impurities; and that in ſuch caſes theſe auxiliaries ought eſpecially to be recommended. But as conſumptive complaints exiſt in many conſtitutions, in which it does not appear that they proceed

ceed from, or are increaſed by, any ſuch retroceſſions; in ſuch caſes to preſcribe iſſues or bliſters, ſeems to be inflicting a certain pain, or perhaps a grievous inconveniency, to obtain a very uncertain advantage.

In my former paper I omitted to take notice of one medicine, which I have ſeen made uſe of too frequently in the treatment of this diſtemper; the oxymel of ſquills. There is ſcarce a circumſtance in the whole courſe of this diſeaſe, in which one of the moſt powerful expectorants can be of uſe; our utmoſt endeavours ought to be exerted, to cool, to abate inflammation, and to remove every cauſe of irritation to the lungs. Under ſuch circumſtances, to give a medicine the moſt irritating of all others, ſeems highly improper.

Hitherto no mention has been made of the uſe and abuſe of a milk diet in this diſtemper. It may, however, be remarked, that there are conſtitutions in which this moſt excellent nutriment ſeems to diſagree; a proneneſs to generate bile, or too ſtrong a tendency to aceſcency from weak organs of digeſtion, both require the phyſician's attention. Whey, either from cows or goats milk, would probably agree beſt with the former; and lime-water, added to the milk, would counteract acidity.

There is one uſual addition made to milk, which I think ſhould either be totally proſcribed, or the moſt expreſs directions given concerning it: I mean the common addition of

rum or brandy to asses or cows milk. These have done more mischief to consumptive patients, than any but physicians can conceive. These additions are mostly committed to the management of servants, who, for the most part, think every thing of this nature cordial; an idea they annex to growing strong; and therefore too often give liberal doses. Ardent spirits not only heat, but coagulate milk, added beyond a certain quantity; by which means the milk disagrees, and the spirit augments the disease.

To enter minutely into the various other circumstances relative to this disease, would be encroaching too much on your plan: permit me, however, to add, that to prevail upon the subjects of it, early to abstain from all animal food, and all spirituous and fermented liquors; to subsist entirely on milk, fruit, vegetables, and things prepared from them; to quit the air of populous towns and large cities; to shun all occasions of anxiety, as well as fatiguing dissipation; to be regular in their hours, rising early, using moderately such exercise as is suited to their strength, and changing the air as far and as often as their convenience will permit; is to render them the most essential services in our power. Medicines will then more efficaciously contribute to abate the fever, mitigate the cough, and restore that strength and vigour which has been wasted by disease, and their own inattention.

SOME

WINTERANA *Aromatica*.

Jn. Lodge Sculp.

SOME ACCOUNT

OF THE

Cortex Winteranus, *or* Magellanicus,

By *JOHN FOTHERGILL*, M.D. F.R.S.

WITH

A Botanical Deſcription by Dr. SOLANDER, F.R.S.

AND

Some Experiments by M. MORRIS, M.D. F.R.S.*

To the Medical Society in London.

Gentlemen,

THOUGH the improvement of the art of healing is your immediate object, yet I do not perceive, from the plan of your inſtitution, that you propoſe altogether to exclude ſuch parts of natural hiſtory as relate to the *Materia Medica*, and which may tend to explain what has hitherto been obſcure, and thereby created confuſion. Preſuming therefore that the following

* Medical Obſervations and Inquiries, vol. v. p. 41. Read November 22, 1773.

account of an article well known by name, and by this chiefly, may be conformable to your intentions, I ſubmit it to your conſideration without any further apology.

When the Dolphin, Captain Wallis, returned from the South Seas in 1768, the officers brought with them a conſiderable quantity of the genuine bark, called Winter's Bark. I call it the genuine bark, to diſtinguiſh it from the *Canella Alba*, which has long uſurped the name of Winter's Bark, though it is very unlike in its appearance and ſenſible qualities, the produce of a different tree, and which is brought from a very different part of the globe.

Captain Wallis, ſoon after his return, gave a ſmall branch of the tree to his friend, Captain Middleton, who was ſo obliging as to make me a preſent of it. Some of the bark I had received before from an officer of the Dolphin. Theſe circumſtances induced me to wiſh ſome ſuch account of this bark might be laid before the public, as is here propoſed to you, that the true *Cortex Winteranus* of the Magellanic Streights might for the future be clearly diſtinguiſhed from the *Canella Alba*, the produce of Jamaica and ſome other Weſt-India iſlands.

The ſpecimen I had received was ſo far perfect, that it enabled the late very eminent draughtſman G. D. Ehret to make an elegant drawing of it, with a tolerably exact deſcription of its botanical characters.

But as I wiſhed to lay before you the cleareſt

account

account I could collect of this ſubject, I prevailed upon Dr. Solander to examine the ſpecimen, deſcription, and the drawing I had procured, and to favour me with ſuch a hiſtory and deſcription of it as might enable botaniſts to place the tree in its proper rank. At the ſame time I requeſted Dr. Morris to lend his aſſiſtance in a chymical analyſis of this ſubſtance.

The following is the Botanical Hiſtory and Deſcription of the *Winterana Aromatica* by Dr. Solander:

The tree which produces the Winter's Bark was utterly unknown to the Europeans till the return of Captain John Winter, who, in the year 1577, ſailed with Sir Francis Drake, as commander of a ſhip called the Elizabeth, deſtined for the South Seas; but immediately after they had got through the Streights of Magellan, Captain Winter, on the 8th of October 1578, was obliged by ſtreſs of weather to part company, and to go back again into the Streights, from whence he returned into England in June 1579, and brought with him ſeveral pieces of this aromatic bark; which *Cluſius*, in his *Exot.* p. 75, calls after him *Cortex Winteranus*, or Winter's Bark.

Several authors have mentioned it ſince in their botanical works; but all they have ſaid has been copied from Cluſius, e. g. Dalechamp Hiſt. p. 1818. Parkinſon Theatr. p. 1652. *Bauhin Pin.* 461. *Jonſton Dendr.* p. 232.

No more was heard of this bark * till the Dutch fleet under Admiral Van Nort returned from the Streights of Magellan, in the year 1600; the author of the account of their voyage calls this tree "Lauro ſimilis arbor licet proce-" rior, cortice piperis modo acri et mordenti." *De Bry. Ind. Occid. vol.* ix. *p.* 18.

Afterwards all the navigators who paſſed through the Streights of Magellan took notice of the tree, on account of the uſefulneſs of its bark; but none furniſhed any deſcription that could make it botanically known, before Mr. George Handaſyd came from the Streights of Magellan, 1691, and brought with him ſome dried ſpecimens, which he gave to Sir Hans Sloane, and are now preſerved in the Britiſh Muſeum, Hort. Sicc. 8. fo. 100. 130. 148. 332. fo. 46. From theſe ſpecimens, and the account Mr. Handaſyd gave of this tree, Sir Hans Sloane drew up a hiſtory, and gave a figure in the Philoſophical Tranſactions, 1693, N° 204, p. 922, t. 1.

* In the account of Amada's and Barlow's diſcovery of Virginia, 1584, it is ſaid that they found there "*Black Cinnamon*, of which Mr. Winter brought ſome from the Streights of Magellan;" *See Hackluyt Voy. vol.* iii. *p.* 246; which is the bark of a very different tree. *Pomet*, in his *Mat. Med. p.* 130, imagined our Winter's Bark to be the ſame with the *Canella Cinnamomea*; *Brown Hiſt. Jam. p.* 275, *fo.* 3; *Cateſby Carol. vol.* ii. *p.* 50, 150; which grows in the Weſt-Indies, between the tropics, and is called by the druggiſts *Canella Alba*. This error has been followed by moſt of the modern writers, and the two trees propoſed under the ſame manner, viz. *Winterania Canella*. *Linn. Sp. Pl.* 638.

"Periclymenum

" Periclymenum rectum, foliis laurinis, cortice " acri aromatico."

Still the ſyſtematical botaniſts could not give it a place in their catalogues, being unacquainted with its flowers and fruit.

The following deſcription and annexed figures, which are taken from the ſpecimens brought by Captain Wallis from the Streights of Magellan, and the obſervations made by us*, during our ſtay in Terra del Fuego, in the Streights le Maire, I hope will ſatisfy the curious, and enable botaniſts to refer it to the proper claſſes of their ſyſtems. It ſeems as if the trees in the Streights of Magellan, near the ſea-coaſt, were ſtinted, perhaps from the high winds, and have ſmaller leaves than thoſe upon Terra del Fuego, where again the flowers were not ſo much expanded as in the Streights of Magellan. This laſt difference may be occaſioned by the ſeaſon, as the flowers on Terra del Fuego were ſeen in the month of January, and in the Streights of Magellan in the month of March.

The Winter's-Bark tree, Winterana Aromatica, is one of the largeſt foreſt-trees upon Terra del Fuego; it often riſes to the height of fifty feet. Its outward bark is on the trunk grey, and very little wrinkled, and on the branches quite ſmooth and green.

The *branches* do not ſpread horizontally, but bend upwards, and form an elegant head of an oval ſhape.

The leaves come out, without order, of an

* Joſeph Banks, Eſq; and Dr. Solander.

oval elliptic ſhape, quite entire, obtuſe, flat, ſmooth, ſhining, of a thick, leathery ſubſtance, evergreen, on the upper ſide of a lively deep green colour, and of a pale blueiſh colour underneath, without any nerves, and their veins ſcarcely viſible; they are ſomewhat narrower near the footſtalks, and there their margins are bent downwards.

In general, the leaves are from three to four inches long, and between one and two broad; they have very ſhort *footſtalks*, ſeldom half an inch long, which are ſmooth, concave on the upper ſide, and convex underneath. From the ſcars of the old footſtalks the branches are often tuberculated.

The peduncles, or footſtalks for the flowers, come out of the *axillæ foliorum*, near the extremity of the branches; they are flat, of a pale colour, twice or three times ſhorter than the leaves; now and then they ſupport only one flower, but are oftener near the top divided into three ſhort branches, each with one flower.

The *bracteæ* are oblong, pointed, concave, entire, thick, whitiſh, and ſituated one at the baſis of each peduncle.

Calix, or *flower-cup*, it has none; but in its place the flower is ſurrounded with a *ſpathaceous* gem, of a thick, leathery ſubſtance, green, but reddiſh on the ſide which has faced the ſun: before this gem burſts, it is of a round form, and its ſize is that of a ſmall pea. It burſts commonly ſo that one ſide is higher than the other, and the ſegments are pointed.

The

The *corolla* conſiſts always of ſeven petals, which are oval, obtuſe, concave, erect, white, have ſmall veins, and are of an unequal ſize, the largeſt ſcarcely four lines long; they very ſoon fade, and drop off almoſt as ſoon as the gem burſts.

The filaments are from fifteen to thirty, and are placed on the flat end ſide of the receptacle; they are much ſhorter than the petals, and gradually decreaſe in length towards the ſides.

The *antheræ* are large, oval, longitudinally divided into two, or as if each was made up of two oblong *antheras*.

The germina are from three to ſix, placed above the receptacle, turbinated, or of the ſhape of an inverted fig, flat on the inſide, and ſomewhat higher than the ſtamina; they have no ſtyles, but terminate in a ſtigma, which is divided into two or three ſmall lobes.

The fruit I have never ſeen in its perfect ripe ſtate, but can conclude from the unripe ones, which I ſaw in abundance, that each germen becomes a ſeparate ſeed-veſſel, of a thick, fleſhy ſubſtance, and unilocular: in each I could plainly diſcern the rudiments of three, four, or five ſeeds.

EXPLANATION OF THE FIGURES.

Obſ. All but Fig. 1. are magnified.

Fig. 1. The ſpathaceous gem, after it is burſt open.

2. The ſame.

3. The

3. The ſame *(a)* with the corolla *(b)* remaining within it.
4. One of the petals ſpread out.
5. The ſtamina *(a)* and the piſtilla *(b)* after the gem and the corolla are taken away.
6. The outſide of an anthera *(a)* with its filament *(b)*.
7. The inſide of the ſame.
8. The germina *(a)* ſituated on the center of the receptacle, after the ſtamina have been removed; the lobated ſtigma *(b)*.
9. The convex, or outermoſt ſide of a germen *(a)* with its ſtigma *(b)*.
10. The inſide of the ſame.
11. A germen cut open longitudinally, ſo as to ſhew the rudiments of the ſeeds.
12. A germen cut through tranſverſely.

To this very accurate hiſtory and ſyſtematical deſcription by Dr. Solander, I take the liberty to ſubjoin an extract of a letter from Captain Wallis, relative to this ſubject, as it contains ſome particulars not unworthy of being preſerved in this account.

" I met (ſays Captain Wallis) with the Winter's Bark at Port Famine, in the Streights of Magellan, in lat. 53. 30. ſouth, and 70. 00. weſt longitude from London. The country is as mountainous as the Alps, and of courſe the tops of them ever covered with ſnow.

" The firſt trees we met with was on Chriſtmas-day, 1766, which is midſummer in that country. The tree had no bloſſom, nor appearance of any at that time. We continued at this place about a fortnight, to wood and water, during which time the ſurgeon, with the aſſiſtance of the ailing people, gathered a pretty large quantity of the bark.

" The trees were of various ſizes, according to the ſoil they grew upon, and their ſituation. Thoſe near the ſea, and in rocky ground, were ſcrubby, the bark ſticking cloſe to the wood, and had a dirty look; thoſe on plain ground and ſheltered were ſtraight and tall, riſing to thirty or forty feet, and as thick as a middle-ſized man. The bark ſmooth, and ſomewhat reſembling the horſe-cheſnut. The trees are exceedingly beautiful; and there were abundance of young ones growing under them, from an inch to ten feet high. I put a great number of theſe ſmall ones into boxes of earth, and ſent them by a ſtore-ſhip to Falkland's Iſlands, where I heard they were planted, but did not live, owing I believe to want of care.

" The leaves of this tree are like thoſe of laurel; its wood is white, light, and neither fit for burning or any other uſe. The wood is inſipid; the taſte is only in the bark and leaves.

" At every place we touched at from Port Famine till we had reached the weſtern end of the Streights, a courſe of about one hundred and twenty leagues, we met with the tree that produced

duced this bark. The weather is much more ſevere in this climate than in England, where, in my opinion, they would thrive very well. We arrived in March at a part of the Streights called Upright Bay, where we were detained a month. The trees here were very ſcrubby, but we found them in bloſſom, as I ſuppoſe they were now alſo at the eaſternmoſt part of the Streights, though we had much ſnow and hard froſts. The flowers were dropped from many of the trees, and the buds or berries were ripening. At that time they were not larger than a pea: I brought many of them home, and gave them to ſeveral of my acquaintance, who ſowed them; but I never heard that any of them came up."

Thus far Captain Wallis.

The bark of the Winterania, or Winter's Cinnamon, brought over by the Dolphin, in reſpect to figure, exactly reſembles that which was delineated by Cluſius. The pieces are about three or four inches ſquare, of different degrees of thickneſs, from a quarter to three quarters of an inch. It is of a dark-brown cinnamon colour, an aromatic ſmell if rubbed, and of a pungent, hot, ſpicy taſte, which is laſting on the palate, though imparted ſlowly. It has the name of Winter's Cinnamon, from a faint reſemblance in colour and flavour to that grateful aromatic, though differing from it greatly in every other reſpect. This bark is only brought to us from the Streights of Magellan, and is the produce of the

the tree above deſcribed; much celebrated as an antiſcorbutic by the firſt diſcoverers, but unknown in the practice of phyſic, no quantity, except as a curioſity, having been brought to Europe till the return of the ſhips ſent out on the expeditions to the South Seas.

The bark which was ſubſtituted in the room of this, is the *Canella Alba* of the ſhops, the bark of a very different tree, and brought from a different part of the world, diſagreeing with the former in almoſt every particular. It is of a light aſh or grey colour; in thickneſs it ſeldom exceeds two-eighths of an inch. The pieces are of different lengths and irregular ſhapes, and for the moſt part are taken from trees of ſmall ſize: its taſte is aromatic, and has more of the clove than the cinnamon. It yields an eſſential oil by diſtillation, and is brought to us chiefly from Jamaica, though it is found I believe in ſome other of the Weſt-India iſlands. There are a few plants of it in the ſtoves of ſome curious botaniſts in England, particularly in that belonging to John Blackburne, Eſq; at Orford, Lancaſhire.

Sir Hans Sloane gives a figure of it in his Hiſtory of Jamaica, from which it evidently appears to be a different genus from the *Winterania Aromatica*.

For want of the knowledge of theſe circumſtances, and an opportunity of comparing the genuine Winter's Bark with the *Canella Alba*, ſome of the moſt reſpectable writers on the *Materia*

teria Medica have ſcarcely been able to avoid confuſion in treating this ſubject; which it is hoped for the future will be avoided, and the diſtinction between them ſufficiently eſtabliſhed.

Experiments *on the* Cortex Winteranus, *or* Magellanicus, *by Dr.* Morris.

1. FIVE grains of *Cortex Winteranus*, in coarſe powder, were infuſed in two ounces of cold water for about an hour; on adding to a part of the filtered ſolution gradually ten drops of a ſaturated ſolution of green vitriol, the liquor became of a blueiſh black, and a black ſediment was precipitated.

2. On repeating the experiment with hot water inſtead of cold, five drops of the ſolution of vitriol ſtruck a purpliſh black with the infuſion; the ſediment was next morning of a dark olive colour, not unlike the ſediment from an infuſion of the Peruvian Bark with *Sal Martis*.

3. On a comparative trial with the infuſion of galls, though the phænomena were the ſame with ſolution of vitriol, yet on examining the ſediment of each next day, that of the infuſion of galls was blacker, lighter, and more copious than that of the Winter's Bark.

Two ounces of Winter's Bark coarſely powdered were infuſed in a pound of clear river-water

water for thirty-six hours; the infusion was filtered, half a pound of water was added to the residuum, and infused with it for the same space of time; being then filtered, it was mixed with the former infusion, and evaporated to a dry extract, which weighed two drachms and twenty-four grains.

On treating two ounces of this bark with the same quantity of proof spirit, two drachms and twelve grains of dry extract were obtained.

On proceeding in the same manner with rectified spirit of wine, two drachms only of extract were produced.

A pound of the said bark in coarse powder was infused in a proper quantity of water for twenty-four hours, and a gallon was carefully drawn off by distillation. The distilled water was clear, of a pleasant taste, and had something of the flavour of cinnamon. There was no essential oil.

The decoction evaporated afforded six ounces of a soft extract, of a grateful aromatic taste.

From these experiments, the *Cortex Magellanicus* appears to be an astringent of a particular kind, and therefore likely to be of use in several manufactures. That water is the proper dissolvent of this bark; though the saline, gummy, and resinous parts are so blended in it, as in saffron and some other vegetables, that it parts with them readily in proof and rectified spirits of wine, though not in so great a quantity.

The infusion and decoction of this bark were

of

of ſo grateful an aromatic bitter taſte, that it ſeems likely to be a pleaſant vehicle for ſome of the nauſeous drugs. With this view, on ſubſtituting the powder of this bark for the cardamom-ſeeds in making the infuſion of ſenna, as directed in the London Diſpenſatory, the nauſeous ſmell and taſte of that excellent purgative was ſo effectually covered, as to be ſcarcely diſtinguiſhed by the niceſt palate. Tincture of rhubarb alſo, prepared with this bark inſtead of cardamoms, ſeemed far leſs diſagreeable.

It muſt not be concealed, that the *Canella Alba* from Jamaica, which is generally ſold for the Winter's Bark in the ſhops, was found to have the laſt-mentioned property, but I think not in ſo high a degree.

M. MORRIS.

I ſhall conclude this account, expreſſing a wiſh, that this very elegant and not leſs uſeful tree might ſpeedily be made a denizen of Britain. Here it would moſt probably grow luxuriantly, as in a much warmer region than its own: it would bear our ſevereſt winters, and be a moſt agreeable addition to our evergreens; and, what is ſtill of more importance, it would probably furniſh us with a valuable medicine.

Captain Wallis, though unſucceſsful in his endeavours, has ſet an excellent example; and if thoſe

thoſe gentlemen who in future may be employed by their country in thoſe parts of the world, take every opportunity of bringing either ripe ſeeds or plants to Falkland's Iſlands, or to England if poſſible, they would merit the thanks of the lovers of ſuch ornaments, and render an eſſential ſervice to the public. I am

Your Friend and Colleague,

J. FOTHERGILL.

OF

A PAINFUL AFFECTION of the FACE *.

To the Medical Society in London.

Gentlemen,

WHEN I related to you, at one of our late aſſemblies, the purport of the following narrative, ſeveral inſtances of a ſimilar affection were then recollected; caſes, which, though nearly akin in appearance to the tooth-ach, and that kind of diſorder of the jaw which is ſometimes called the rheumatiſm, ſometimes the ague in the head, and which had not given way to thoſe remedies and applications that in ſuch complaints are moſt commonly ſucceſsful in curing them; you then thought that a more particular account of this diſeaſe, and the method of removing it, might not be unacceptable to the public: for though it does not every day occur, yet to be able to diſtinguiſh and to cure,

* Medical Obſervations and Inquiries, vol. v. page 129. anno 1773.

with ſome degree of certainty, a diſeaſe, that, during the time it laſts, is extremely excruciating, is an addition, however ſmall, to the utility of our profeſſion.

In the third volume of the Medical Obſervations, among the remarks on the efficacy of hemlock in relieving ſome anomalous pains, there is one caſe mentioned of a perſon cured by it of a painful diſeaſe affecting the face*. It is a diſeaſe that has occurred to me ſeveral times; it ſeems to be of a ſingular nature, and, ſo far as I know, altogether undeſcribed.

This affection ſeems to be peculiar to perſons advancing in years, and to women more than to men. I never met with it in any one much under forty, but after this period, no age is exempt from it.

The caſe does not occur very frequently. I can recollect but about fourteen inſtances in the courſe of my buſineſs.

This laſt year I was conſulted for two women, one near eighty, the other about fifty years of age, both of them in other reſpects healthy.

From imperceptible beginnings, a pain attacks ſome part or other of the face, or the ſide of the head: ſometimes about the orbit of the eye, ſometimes the *oſſa malarum*, ſometimes the temporal bones, are the parts complained of. The pain comes ſuddenly, and is excruciating; it laſts but a ſhort time, perhaps a quarter or

* See p. 56, & ſeqq. of this volume.

half

half a minute, and then goes off; it returns at irregular intervals, sometimes in half an hour, sometimes there are two or three repetitions in a few minutes.

The kind of pain is described differently by different persons, as may be reasonably expected; but one sees enough to excite one's compassion, if present during the paroxysm.

It returns full as often in the day as in the night. Eating will bring it on some persons. Talking, or the least motion of the muscles of the face, affects others; the gentlest touch of a hand or a handkerchief will sometimes bring on the pain, whilst a strong pressure on the part has no effect.

It differs from the tooth-ach essentially in many respects. It affects some who, from age, have few or no teeth remaining. It most commonly seizes some part above the sockets of the teeth, yet the teeth are sometimes affected with an exquisite sensibility, upon endeavouring to chew even the softest substance. The lower jaw is seldom attacked with this disease.

It differs likewise from that disorder which has obtained the name of an ague or rheumatism in the face, a disorder as painful as it is frequent. This, though it is often connected with some decay in the teeth and the nerves that are distributed to them, yet for the most part its exacerbations are regular in respect of time, like the fits of an ague; and at night, as in the rheumatism.

The tooth-ach, ariſing from a faulty tooth, does not often indeed afford much remiſſion from pain, till either the inflammation is abated by ſome means, or the nerve is deſtroyed, or rendered leſs ſenſible.

But when to the uſual cauſe of a tooth-ach this rheumatic diſpoſition is conjoined, though the pains are never intirely off, yet the night is the time of their greateſt ſeverity. Beſides, the ſeaſon of the tooth-ach and this ſpecies of rheumatiſm is generally from the end of adoleſcence to the meridian of life, or later.

The diſeaſe which is the ſubject of this eſſay is ſeldom obſerved till between forty and fifty, and through the later ſtages of life. Contrary to what happens in the preceding complaints, the affection I am treating of is moſt commonly ſeverer in the day than in the night; ſometimes, indeed, it is excited to an extreme degree of violence by the lighteſt touch of the bed-clothes, which can ſcarcely be avoided in turning, or any other motion in bed.

Some painful affections of the head, and which ſometimes extend to the face, likewiſe occur in practice, that ariſe from ancient venereal complaints imperfectly cured.

Theſe likewiſe, as the rheumatiſm above mentioned, are always moſt ſevere in the night; they come on inſenſibly about bed-time, they increaſe till morning, then abate, ſo as to allow a few hours ſleep, and are little felt in the day. The pain is deſcribed by the patient to be in the

the bone itſelf, as if bored with a gimlet, or ſome other inſtrument. From its commencement in the evening till it abates in the morning, it never is entirely off, nor does it ſhift from one part to another of the head and face, as frequently happens in the rheumatiſm; beſides, a little enquiry generally affords one ſufficient grounds to juſtify the treating of it as a venereal complaint.

One of the firſt caſes I met with was in a widow gentlewoman of about ſixty-five years of age, who in general had enjoyed a good ſhare of health, in eaſy circumſtances, and without any apparent cauſe of anxiety, or other latent cauſes of diſeaſe.

In a moment ſhe would be ſeized with the moſt acute excruciating pain, affecting the inner *canthus* of the eye: it laſted but a few ſeconds, forced out the tears, and gradually went off. In a few minutes the ſame thing happened, and in like manner at unequal diſtances during the day, ſo as to occaſion a life of great miſery.

Its appearance was like that of a ſevere ſpaſm: it had been conſidered as ſuch, and treated with the moſt efficacious antiſpaſmodics, but to little purpoſe; the pain ſtill continued returning in the ſame manner. Opium in conſiderable doſes was the only medicine that procured relief; but the coſtiveneſs it occaſioned, with the thirſt and head-ach, almoſt made her of opinion, that the remedy was not leſs difficult to bear than the diſeaſe. At length,

however, it ſeemed to decline by the uſe of extract of hemlock, together with her ſtrength; general ill health enſued, and ſhe continued a ſufferer by it to her death.

As I was often preſent when theſe exacerbations happened, it was not difficult to recollect the diſeaſe when I met with it in other ſubjects; ſeveral of whom I have ſeen, and always with concern, as the methods I had purſued for the moſt part obtained but a temporary relief, till I made uſe of the extract of hemlock in the caſe above mentioned. Since that time I have had recourſe to it whenever the diſeaſe occurred, and for the moſt part with ſucceſs.

One of the laſt caſes I met with, was the moſt obſtinate I had ſeen. A gentlewoman near fifty, of a full habit, rather ſtrong make, accuſtomed to plenty, and uſing much and various exerciſe, had been ſeized with a violent pain affecting one ſide of her head and face, from the upper edge of the temporal muſcle down its whole extent, and reaching to the teeth on that ſide. Before I had been in the room two minutes, I ſuſpected, from the violent contortions of the face and the whole body, that her complaint was of the kind I have been deſcribing. Not that theſe contortions are ſpaſmodic or involuntary, but ſuch as ſevere pain often occaſions, when we endeavour to abate the ſenſe of pain in one part by a general exertion of force upon ſome other, or over the whole body. Speaking, or chewing, or even ſlightly touching the

the ſkin or the ſide affected with the ſofteſt handkerchief, would immediately excite the pain, which, after continuing perhaps a quarter or half a minute, gradually went off, till it was again awakened by ſome freſh motion. She had been under the care of ſeveral perſons of eminence in the profeſſion, who had ſcarcely left any rational methods of relieving her unattempted. She had no fever, no other indiſpoſition that pointed out means of relief.

The extract of hemlock was ordered, the quantity gradually increaſed to a full doſe; and this was continued almoſt a month before any conſiderable amendment was obſerved. So much relief, however, was obtained as to encourage us to proceed. Sometimes, indeed, it returned for a few days with as much violence as ever. Still we perſiſted. It was almoſt a year that ſhe perſevered in this method, and to her entire ſatisfaction; as near another year has elapſed without perceiving any intimation of it. She took no other medicine during the uſe of the extract, except ſometimes a gentle laxative when occaſion required; nor was her diet altered, only ſome cautions given to uſe the lighteſt, leaſt ſavoury kinds, and with ſome reſtrictions in regard to quantity.

In caſes of ſingular difficulty and obſtinacy, it is natural for us to be inquiſitive into their cauſes and their nature; unſucceſsful experiments ſometimes lead the way to inſtruction; and we ought never to ceaſe inveſtigating the moſt abſtruſe

abſtruſe receſſes of nature, nor at the ſame time forget the narrow limits of our capacity, and the danger of preſumption. What therefore I have to offer upon the nature of this diſeaſe, is rather ſubmitted to your conſideration as matter of farther enquiry, than as opinions ſufficiently eſtabliſhed.

On reviewing the caſes I have ſeen of this diſorder, I recollected the ſubjects were moſtly women. That they were for the moſt part, if not all, paſt the time of menſtruation. That they were generally of a firm and ſomewhat robuſt habit, generally with black hair, and not ſubject to any particular diſeaſes. Moſt of them had borne children; and nothing remarkable had occurred about the ceſſation of the *menſes*; in general, rather of a coſtive habit, and in the middling ſituations of life.

In two of theſe caſes, a ſmall hard tumour in the breaſt had occaſioned ſome ſuſpicion of a ſchirrhus; but had never proceeded to give trouble.

Theſe appearances, however, excited my attention, and induced me to ſuſpect that the cauſe of theſe extreme pains in the face might poſſibly be of a cancerous nature; the method of cure and other circumſtances ſeem to corroborate the ſuſpicion.

The ſex, the time of life, two caſes where a tendency to this was obvious, as well as the kind of pain, which was ſudden, frequent, and

ſevere, and as ſuddenly remitting, were to me farther confirmations.

In tracing the hiſtory of perſons afflicted with cancers not apparently proceeding from external cauſes, we ſhall find for the moſt part they have been afflicted with erratic pains in the limbs, often about the loins, ſometimes in the thighs, and other muſcular parts. Theſe have commonly been conſidered by the patients as merely rheumatic; but if we enquire more particularly, we ſhall find they are very different. They are not always worſe in the night than the day. They are not a dull, heavy, aching pain, and continual; but ſharp, lancinating, and remittent. They are not much affected by the weather, nor by any obvious cauſes; and they frequently diſappear for ſome time; at leaſt, there is a conſiderable abatement in their violence.

Theſe pains do not always ceaſe when the cancer becomes obvious; they are ſometimes ſevere when the diſeaſe is making great progreſs externally: and experienced ſurgeons well know how little benefit the unhappy patients have to expect from removing the breaſt or other diſeaſed part, if the patients have been long ſubjected to ſuch complaints.

It ſeems not improbable, but that a ſharp, corroſive, cancerous acrimony may long be pervading, like electrical matter, certain ſeries of veſſels, and, when collected in a certain quantity,

tity, may create theſe pains; yet without ſeizing upon any part with ſuch violence as to deſtroy its functions. But if a part that favours its operations is once injured, thoſe we call glandular eſpecially, as the breaſts, and the ſubcutaneous glands in the face, and other parts; if theſe become incapable of reſiſting or ſubduing the cancerous matter that may be thrown upon them, the miſchief then becomes evident, and advances in proportion to the combination of thoſe cauſes which favour its progreſs. An original diſpoſition to form ſuch acrimony, bad health, anxiety, external injury, and extreme ſenſibility of pain and danger, ſeem to conſtitute a part of theſe cauſes.

There are few phyſicians, I believe, who may not, on reviewing many caſes which have occurred to them of anomalous pains in different parts of the body, ſo as ſometimes to counterfeit gouty, bilious, and other internal affections of the ſtomach and bowels, perceive ſome analogy between them and the complaints here pointed out.

Perhaps a cancerous acrimony may have been the baſis of ſome of theſe ſtubborn evils, and probably a good deal of miſchief might have been prevented by treating them early as if they were known to be of a cancerous complexion, by opening a drain, by repeated ſmall bleedings, by gentle cooling laxatives, the hemlock, a light diet, and the other uſual auxiliaries in ſuch complaints.

plaints. It is with a view to promote ſome attention to this object, that I have troubled you with theſe reflections.

P. S. Since the preceding account was preſented to the Society, I have met with two more caſes of this painful affection; and found upon enquiry, that in both theſe there had been hard, permanent, and painful tumours in the breaſt; that theſe tumours became leſs painful when the face was attacked; and that both the one and the other had yielded to the efficacy of this medicine, the pain and the tumour both abating.

Mimosa *Japonica*.

AN ACCOUNT OF THE TREE PRODUCING THE TERRA JAPONICA,

Communicated by Dr. *FOTHERGILL**.

To the Medical Society in London.

Gentlemen,

YOU will excuſe me, I hope, for introducing to your notice, an exact deſcription of the tree that produces the Extract called *Terra Japonica*. Hitherto it has rather been gueſſed at than known, from whence this ſubſtance derives its origin; the beſt of our writers on the *Materia Medica* have given us very little of certainty concerning it.

The figure here exhibited is copied from a drawing taken on the ſpot, compared with a good ſpecimen tranſmitted with it, of the leaves,

* Medical Obſervations and Inquiries, vol. v. p. 148, anno 1773.

flowers,

flowers, pods, and ſeeds. The ſeveral parts of the flower have been examined by the microſcope, and delineated with great accuracy; and every doubt concerning the origin of this ſubſtance will hereby be removed. It will give you ſome ſatisfaction to know, that ſome of the ſeeds have vegetated; and that perhaps we may be able to propagate the plant, ſo far as to ſend it to our Weſt India iſlands, where it will probably flouriſh, and yield us, by the labour of our own people, an Extract in greater perfection than can be expected from a proceſs attended with ſo little care in the Eaſt Indies. If I have treſpaſſed too much on your plan, by introducing ſo many articles of Natural Hiſtory, I muſt entreat your indulgence for the preſent: it ſeems to be doing ſome benefit to ſcience, to remove ambiguity, and prevent all poſſible miſtake. Your works, Gentlemen, paſs into the hands of many ingenious medical perſons who traverſe the moſt diſtant parts of the globe. Inſtances like theſe, prompt them to obſerve; and it is from the labour of ſuch, that this part of ſcience, a perfect knowledge of the *Materia Medica*, has hitherto, and muſt ſtill derive its greateſt improvements.

This account was drawn up by an attentive, able naturaliſt, aſſiſtant-ſurgeon to the civil hoſpital at Bengal, and tranſmitted by the learned and worthy Lieutenant-colonel Ironſide to

J. FOTHERGILL.

Extract

Extract of a Letter from Mr. James Kerr, to Lieutenant Colonel Ironside.

Dear Sir,

I Have endeavoured to set in a clear light a part of natural history concerning which the learned have wrote many inconsistencies. I wish it had been done by an abler hand; for a person of my obscurity will hardly be trusted, when contradicting so many great men. The description was taken from the living plant, and I carefully attended the process of the manufacturer, and repeated it myself; so that however defective the descriptive part may be, it will certainly have the merit of being strictly true. I am,

Dear Sir,

Your most obedient servant,

(Signed) *JAMES KERR.*

A Description of the Plant from which the Terra Japonica is extracted.

THIS plant is called Coira or Caira by the natives of Bahar Province.

It appears to be the same as mentioned by Cleyerus, Dale's Pharmacologia, p. 271. and by Herbert De Jagur (see Hill's Materia Medica, p. 785.) from which he says the natives of Pegu prepare this Extract; they name the tree Kheir or Khadira.

It is a ſpecies of the Mimoſa of Linnæus.

The root is branching and permanent.

The ſtem is generally from three to five feet high, and will grow to about one foot diameter, covered with a thick, ſcabrous, dehiſcent, brown bark, and branching into a denſe, ſpreading top, ſeldom above twelve feet high; the wood is extremely hard and heavy, the interior part varies from a pale brown to a dark red, approaching to black in different plants, but always covered with one or two inches thick of white wood.

The leaves ariſe from the young branches alternately, at one or two inches diſtance, from four to ten inches long, and doubly winged; the partial wings are nearly two inches long, and from fifteen to thirty pairs, having ſmall umbilicated glands on the ſuperior part, placed between the inſertions of the wings, and one larger placed below the firſt pair; each wing has about forty pair of linear lobes three-tenths of an inch long.

At the baſe of each leaf there are two recurved prickles; in young plants they are ſtrong, in the old plants they are often flexile, and ſcarce viſible. Nature thus partially guards the young of ſeveral Mimoſas and other prickly plants: it is a miſtaken opinion that animals will not eat the leaves of the Mimoſa.

From the axilla of the leaf ariſes one, ſometimes two, denſe ſpikes, four or five inches long; the flowers are ſmall, white, ſeſſile, with a ſmall deciduous ſquama under each flower.

The

The empalement is of one tubulous pubeſcent leaf, divided at top into five acute patent parts.

The petal is of the ſame form as the calyx, but double its length, and whiter.

There are a great number of capillary filaments double the length of the petal, adhering together at the baſe of the germen: the antheræ are ſmall and almoſt globular.

The germen is oval, with a ſhort pedicle, and a filiform ſtile as long as the filaments, with a very ſmall terminating ſtigma.

The legumen is about two inches long, lanceolated, brown, ſmooth, (not jointed) and compreſſed with an undulated thin margin.

The pod contains ſix or eight orbiculated, hard, compreſſed, diſtant ſeeds, producing a nauſeous odour when chewed.

It is one of the moſt common trees to be met with on the uncultivated mountains of Rotas* and Pallamow, and frequent in many other parts of this country, in various ſoils.

The leaves and flowers appear in June; in the day the leaves are expanded, in the night they collapſe; and after the proceſs of fructification is finiſhed, they fall off, and the aculei decay. The pods remain until April following; when a branch is lopped off, the leaves inſtantly collapſe.

From the interior coloured wood is produced the Extract erroneouſly called *Terra Japonica.*

* Diſtricts of Hindoſtan, in the province of Bahar, weſtward of Bengal.

Preparation of the Extract.

After felling the trees, the manufacturer carefully cuts off all the exterior white part of the wood. The interior coloured wood is cut into chips, with which he fills a narrow-mouthed unglazed earthen pot, pouring water upon them until he ſees it among the upper chips; when this is half evaporated by boiling, the decoction, without ſtraining, is poured into a flat earthen pot, and boiled to one-third part; this is ſet in a cool place for one day, and afterwards evaporated by the heat of the ſun, ſtirring it ſeveral times in the day; when it is reduced to a conſiderable thickneſs, it is ſpread upon a mat or cloth which has previouſly been covered with the aſhes of cow-dung; this maſs is divided into ſquare or quadrangular pieces by a ſtring, and completely dried by turning them frequently in the ſun, until they are fit for ſale.

This Extract is called *Cutt* by the natives, by the Engliſh *Cutch*, by authors *Terra Japonica*, *Catechu*, *Cadtchu*, *Caſhow Cachou*, *Caitchu*, *Caſtjoe*, *Cachore*, *Kaath*, *Cate*, &c. In making the Extract the pale brown wood is preferred, as it produces the fine whitiſh Extract: the darker the wood is, the blacker the Extract, and of leſs value. They are very careful in drying their pots upon the fire before they are uſed; but very negligent in cutting their chips upon the ground, and not ſtraining the decoction; by which, and the

the dirty aſhes they uſe, there muſt be a conſiderable quantity of earth in the Extract, beſides what avarice may prompt them to put into it. This the learned have proved from their laborious chemical decompoſitions. The Extract, thus prepared, is bought from the manufacturer for twelve or fifteen ſhillings the eighty pounds weight. I could never learn that the *Terra Japonica* was produced from the *Areca* or *Betle-nut*; nor is it indeed credible that it ſhould, notwithſtanding that this is the general and received opinion, for the *Betle-nut* is ſcarce ever ſo low in price as the *Terra Japonica*, and was it to be extracted from thence, the price would be twenty times dearer than the preſent ſales. Where the *Areca-nut* is in great plenty, they may perhaps join ſome of the fruit in making the Extract, to anſwer a double purpoſe, for the moſt frequent uſe of both is in chewing them together, as Europeans do tobacco; to theſe two ſubſtances they add a little ſhell lime, and a leaf called *Pauw*.

Here I am obliged to have recourſe to the natives, whom from experience I have found to be very fallacious, therefore I will not anſwer for their veracity.

The Extract is much uſed in dying and painting chintz, and other cloths; combined with vitriolic ſalts, a black colour is produced; mixed with oil, they paint the beams and walls of houſes to preſerve them, and to defend them from the deſtructive white ants; it is ſometimes mixed with their wall plaiſter.

The black phyſicians of this country divide the diſeaſes of mankind, as well as their medicines, into hot and cold; to the cold diſeaſe they oppoſe a hot medicine, and to the hot diſeaſe a cooling medicine, among which laſt this Extract is ſuppoſed very powerful. When too profuſely uſed it is ſaid to be a deſtroyer of venereal pleaſures.

It is given at the rate of two ounces per day to tame vicious horſes.

The Furnace uſed in making the Extract.

Dig a hole in the earth five or ſix feet long, two feet deep, and two feet wide; cover this with an arch of clay, leaving one end open to receive fuel, and take out the aſhes; in the arch three or four circular openings are made, adapted to the bottoms of the pots: the ſame ſtructure may be raiſed above ground, made of clay. This furnace is very valuable for its ſimplicity, eaſy conſtruction, and ſmall expence of fuel.

The Extract is a principal ingredient in one of their ointments of great repute, compoſed of blue vitriol four drams, Japan earth four ounces, alum nine drams, white reſin four ounces; theſe are reduced to a fine powder, and mixed with the hand, adding olive oil ten ounces, and water ſufficient to bring the maſs to the proper conſiſtence of an ointment. This ointment is uſed in every ſore, from a freſh wound to a venereal ulcer.

cer. A gentleman * of great practice told me, he uſed this ointment with ſucceſs beyond expectation; and he remarks, that, whether it is owing to the laxity of the ſolids in this hot climate, or to ſome other cauſe, he is clearly of opinion, that our greaſy ointments have not the deſired effect. Certain it is they avoid that *empyreuma* which our ointments often receive in boiling, which cannot be a promiſing application to a tender ſore. As to the virtues of this Extract in European practice, I muſt be ſilent, as they are already better deſcribed than I can pretend to do.

(Signed) *JAMES KERR.*

* Mr. Robert Hunter, Surgeon of the Patna Factory.

OF THE MANAGEMENT PROPER AT THE CESSATION OF THE MENSES*.

To the Medical Society in London.

Gentlemen,

THERE is a period in the life of Females to which, for the moſt part, they are taught to look with ſome degree of anxiety; as a period on which depends their enjoying a good or bad ſtate of health during the reſidue of their lives.

The various and abſurd opinions relative to the ceaſing of the menſtrual diſcharge, and its conſequences, propagated through ſucceſſive ages, have tended to embitter the hours of many a ſenſible woman. Nor have theſe miſtaken notions been confined to them only; they have oc-

* Medical Obſervations and Inquiries, vol. v. p. 160. anno 1774.

cupied

cupied the minds of ſuch who ought to have been better informed: ſome practitioners, in other reſpects able and judicious, if they have not favoured theſe erroneous and terrifying notions, ſeem not to have endeavoured to correct them, with the diligence and humanity which an object like this requires.

The deſign of this eſſay is to contribute my mite towards ſo neceſſary a purpoſe; to aſſiſt in removing theſe groundleſs apprehenſions, and to ſubſtitute a reaſonable confidence, that, with very little aid, Nature is ſufficient to provide for her own ſecurity on this occaſion.

You muſt forget for a moment that I am ſubmitting theſe remarks to the judgment of a Society, every member of which, perhaps, is as capable of this work, and ſome much better than myſelf. I am writing to many ſenſible young men in the profeſſion of phyſic, who, though they may have applied themſelves to the general ſtudy and practice of our profeſſion with diligence and ſucceſs, may not yet, perhaps, know where to look for ſuch information on this ſubject as may be ſufficient to ſatisfy themſelves and their patients, what management is proper when the Menſes are about to ceaſe.

To propoſe a regimen that ſhall ſuit all the different caſes that may occur, would require a volume. To give ſome general direction is all I intend, without entering into a minute deſcription of the commencement, progreſs, and termination of the Menſes. I muſt ſuppoſe every

thing of this kind is already known, and that the ſingle queſtion is, What conduct, what management is neceſſary to be obſerved when the Menſes are about to ceaſe, by the patient who conſults her phyſician on the occaſion? We are now ſenſible that the menſtrual diſcharge is not, what it was too long and too generally believed to be by many of the ſex, an evacuation of peccant matter and morbid humour, ſometimes acrimonious and malignant, whoſe retention, from its noxious qualities never fails to be extremely injurious, to the conſtitution. What opinion the ancients entertained concerning it, I need not repeat to you: That its malignancy was ſuch as to affect even inanimate bodies. But theſe fables are wholly diſbelieved, except by ſome of thoſe who ought to be undeceived in a matter that ſo much concerns them.

It is now well known, and the ſex cannot be too generally apprized of it, that the menſtrual diſcharge poſſeſſes no ſuch injurious or malignant properties; that it is ſolely a redundancy of that pure vital blood, which animates the whole frame of a healthy perſon; and that its retention is by no means attended, in general, with effects that are not as eaſily removed as any diſorder to which they are ſubject.

That ſome acrimonious morbid humours may be diſcharged together with the Menſes, when any ſuch exiſt, is not improbable. So it happens likewiſe to men ſubject to the piles, or other preternatural excretions.

Women

Women who have unhappily imbibed that prejudice, are naturally alarmed at the conſequences they apprehend muſt enſue from ſuch a change in their conſtitution; and the more ſtrongly they are prepoſſeſſed with a belief, that by this channel has been regularly diſcharged whatever had a tendency to produce diſeaſes, the more they are terrified with apprehenſions of ſome of the worſt complaints: and, indeed, it is not ſeldom that, by ſuch anxiety, they bring on diſorders that are not eaſily removed, attributing them to the cauſe we are ſpeaking of, whilſt they principally originate from anxiety.

For the moſt part, the menſtrual diſcharge, as has been mentioned, proceeds from a redundancy of good and healthy blood: this redundancy is formed for the moſt neceſſary purpoſes; continues whilſt this neceſſity ſubſiſts; and ceaſes when, according to the conſtitution of the female frame, it is no longer required.

The powers communicated to the human ſyſtem, generally expreſſed by the term Nature, are ſuch as ſpontaneouſly bring about this ceſſation. The proviſion for the Menſes ceaſes, an extra quantity of blood is not generated, and the veſſels provided for its regular diſcharge by degrees collapſe; and in general all this proceeds without any the leaſt interruption to the health of the ſubject in which this alteration happens. Here it might not be improper to mention at what time this alteration firſt begins, and the general period of its ceſſation. Theſe circumſtances,

ſtances, however, may be found elſewhere ſo amply treated of, as to render it as unneceſſary as it is foreign to my preſent deſign.

There are great numbers of women in whom the menſtrual diſcharge ceaſes, without their perceiving any alteration in their uſual health. There are ſome who, from being invalids during a part of the ſeaſon which is appropriated to menſtruation, find themſelves by degrees recovering health and vigour, to which they have been ſtrangers during that period, when this diſcharge leaves them entirely. Very tender, delicate, relaxed habits, ſubject to copious diſcharges, are often much benefited by the ceſſation. All, however, are not ſo fortunate. Some alterations frequently ſupervene, that render aſſiſtance neceſſary.

Amongſt theſe alterations, the moſt frequent are ſuch as ariſe from a redundancy of blood and immoderate diſcharges from various cauſes.

About the time when this change is to happen, or not long after, many perſons find the diſorders to which they have heretofore been ſubject, more frequent and more troubleſome. Some are afflicted with the well-known ſymptoms of plethora, heat, fluſhings, reſtleſs nights, troubleſome dreams, and unequal ſpirits; others are attacked with inflammations of the bowels, or other internal parts, ſpaſmodic affections of various parts, ſtiffneſs in the limbs, ſwelled ancles, with pain and inflammation, the piles, and other effects of plenitude. In theſe caſes it

ſeems

ſeems as if the organs, which were inſtituted with a deſign of providing the natural ſurplus, continued to produce this effect, whilſt the ſize of the veſſels deſtined to diſcharge it, was diminiſhed, or they were collapſed entirely.

This caſe is oppoſite to the former; in that the organs of excretion continued to execute their functions, and actually diſcharged a portion of blood from the common maſs, whilſt thoſe organs which are formed to provide a ſurplus in enfeebled habits, were only capable of maintaining the neceſſary ſtock. And on the diſparity in the operations of theſe two different organs, in fact, depend moſt of the complaints incident to the ſex at this particular period. In ſome, the proviſion ceaſes before any change is produced in the excretory veſſels. In others, the excretory veſſels become unfit for their office, whilſt the organs for accumulating blood continue to be efficacious.

From this view of the ſubject, it will be leſs difficult for the practitioner to form a judgment of what is fit to be done on various emergencies: it will be eaſy to diſcover how far evacuations are likely to avail; and when other means become neceſſary. Thoſe of full plethoric habits, accuſtomed to copious evacuations, will find great relief by bleeding frequently in moderate quantities, keeping the bowels lax, and moderating their diet. They are, for the moſt part, attacked about the time of menſtruation with ſudden fluſhing heats, ſucceeded by inſtantaneous

taneous ſweats, continuing for a few ſeconds, then going off for a ſhort time, and again recurring many times in the day; they are worſt after eating, in a room much heated, in large aſſemblies, in bed, attended with reſtleſſneſs and frightful dreams. Theſe gradually abate for a few weeks, and as the period approaches again, come on, and ſo ſucceſſively, for a year or two, or more, terminating ſometimes in large immoderate fluxes; ſometimes in apoplexies, palſies, and other diſeaſes ariſing from plenitude.

If ſuch are adviſed to loſe four, five, or ſix ounces of blood, at the diſtance of two, three, or four months, juſt as the vehemence of the ſymptoms requires, every thing of this may be happily prevented; and as the occaſion for bleeding daily decreaſes, its repetition may be put off to longer intervals.

It happens frequently, that ſome circumſtances attend the patients, which induce practitioners to omit this operation, or at leaſt induce the patients to object to it in ſuch a manner as to get it poſtponed. They alledge they are ſubject to nervous complaints; they never could bear bleeding; it always hurt them; and the like. But with a full, hard pulſe, great heat, and the other ſymptoms deſcribed, one need not fear the increaſe of any ſuch complaints; on the contrary, as they proceed ſo evidently from plenitude, they ſeldom fail to give way to moderate and repeated evacuations.

It is not unuſual in ſuch caſes to be informed that

that the patient has ſwelled ancles; and that bleeding would inevitably, at that time of life, bring on a dropſy. But if this fulneſs appears to be hard, inflamed, and painful, as is moſt commonly the caſe in ſome degree, the lancet and ſome gentle laxative will ſcarcely fail of removing, inſtead of aggravating, the complaint; and recourſe may be had to the ſame remedies, if the like complaints recur.

There is another circumſtance often happens at this period, ſometimes owing to the neglect of evacuations at a proper time, ſometimes to the uſe of improper medicines, ſometimes to the peculiar conſtitution of the patient; I mean an immoderate flux of the Menſes, which often requires the utmoſt care in its reſtraint and future regulation.

For the moſt part this happens to women of ſanguine habits, living well, accuſtomed to copious evacuations, or to the general effects of plenitude.

If, in ſuch conſtitutions, the evacuations are not very conſiderable, their health is often interrupted, either by frequent inflammations of the tonſils, and other glandular parts, or they have the rheumatiſm, eryſipelas, or the piles; if in theſe habits the Menſes ceaſe very ſuddenly, they are either expoſed to the complaints above mentioned, more frequently, and to a more violent degree, or to repeated and exceſſive floodings. A little attention to theſe circumſtances will often point out the means of effectual prevention.

vention. But if it does happen, it ſeems much more prudent to reſtrain the flux by gentle laxatives, cooling medicines, reſt, anodynes, a moſt ſparing diet, and this not too liquid, than by very copious bleeding, and aſtringents of any kind.

There is another kind of habit to which ſuch immoderate diſcharges are too familiar;---to perſons of very irritable conſtitutions, and at the ſame time not remarkably plethoric. If in ſuch conſtitutions the Menſes go off very ſuddenly, it happens ſometimes that the impetus of the blood on the uterine ſyſtem produces a violent hemorrhage, that enfeebles extremely at the time, and, as it increaſes the irritability of that part of the ſyſtem in particular, ſubjects the patient to very frequent and expenſive relapſes.

In theſe caſes, bleeding would undoubtedly increaſe the diſeaſe. Medicines that allay irritation, anodynes, quiet, a moderate cordial, as wine, and a light nutritive diet, at once take off the cauſe, and enable the patient to ſupport the expence with the leſs difficulty.

It has happened that a regular intermittent has been attended with a regular and immoderate flux. In ſeaſons when autumnal intermittents are frequent, ſuch circumſtances will now and then happen to patients who have ſuffered conſiderable loſs about the time of ceſſation. In ſuch caſes the bark, given with the ſame freedom as in curing the ague, ſafely cures both the flux and the intermittent.

Sometimes theſe immoderate fluxes proceed from ſome irritating cauſe reſident in the uterus, or the parts contiguous to it. And amongſt theſe none is more common, than that depoſition of acrimony which precedes a cancer of the parts.

In ſuch caſes the moſt appoſite remedies are often ineffectual. The flux is attended with pain and heat darting acroſs the pubes, from hip to hip, and down to the middle of the thigh. Large clots of blood are frequently diſcharged, that give exquiſite pain in paſſing, and at the ſame time the flux is increaſed by the ſtimulus.

It is not uncommon in ſuch caſes to ſee the bark adminiſtered very freely, and I am afraid to no good purpoſe. Indeed it requires the hand of a maſter to give this medicine properly in uterine diſcharges. In caſes of plenitude it is injurious; it ſeems to be ſo likewiſe in this caſe juſt deſcribed. In ſuch as proceed from mere debility and relaxation, it may ſtand a much better chance of being uſeful; but it is to be feared, that incipient ſchirrhous and other obſtructions have been much aggravated, by the injudicious exhibition to reſtrain a diſcharge, which depended on cauſes not in the power of this great medicine to ſubdue.

To enter into all the particulars that attend this event will be unneceſſary. Permit me, however, to make ſome remarks upon the kind of purgatives that are much in uſe upon theſe occaſions,

caſions, and to ſome of which there are very juſt objections.

An opinion generally prevails among the ſex, that purgatives are particularly neceſſary at this juncture; and is aſſented to by the generality of practitioners, who, had they made a proper choice, would have acted more prudently. Various preparations of aloes, the *tinctura ſacra, pil. Ruſi, elixir proprietatis*, and other compoſitions of this kind, are recommended, from one to another, as proper purgatives to be uſed on the ceſſation of the Menſes.

But if we reflect a little upon the known effects of this drug, in all its preparations, we ſhall find it almoſt uniformly producing the piles, if taken long together, and in conſiderable doſes.

From its effect in ſtimulating the hemorrhoidal veins and contiguous parts, it has long been adopted as the baſis of moſt medicines exhibited with a view to promote the menſtrual diſcharge in young females, where it does not appear at the uſual time, or in a proper quantity, and often with ſucceſs. It can ſcarcely then be rational to give that medicine, which is found to be efficacious, from its power of irritating the hemorrhoidal and contiguous veſſels, and determining the blood with a due degree of force on the uterus, to produce the Menſes, at a time when we are endeavouring to abate this impetus, rather than increaſe it: in ſhort, it ſeems highly abſurd to make uſe of thoſe medicines when the Menſes are about to ceaſe, and ought ſo to do,

which are given to provoke and promote this evacuation. Inſtead, therefore, of countenancing a treatment which is not only unreaſonable in theory, but injurious in practice, every convenient opportunity ought to be embraced, to expoſe and correct a popular error, than which perhaps there are few in the circle of medicine that are more miſchievous.

Repeated inſtances have occurred to me, of grievous inconveniences ariſing from theſe heating medicines; the piles, ſtrangury, immoderate diſcharges of the Menſes, racking pains in the loins repreſenting labour-pains, and other ſimilar complaints.

There are many perſons, it is true, who cannot eaſily bear the more cooling purgatives; very tender delicate habits are moſtly affected by them: but it is not difficult to contrive cathartics, neither heating like the aloes, and other gummy reſinous medicines, nor yet chilling as the ſalts. Rhubarb, ſena, magneſia, ſulphur medicines, ſmall doſes of jalap, and various combinations of them, will ſupply ſufficient variety to the preſcriber and the patient.

It will be of more efficacy in curing of complaints ariſing from the cauſes we are treating of, to contrive ſome eaſy method of preventing coſtiveneſs, than to be dealing often and freely with purgatives of any kind. It happens in ſome conſtitutions, that the menſtrual diſcharge is protracted much beyond the uſual period of its ceſſation in others. Whilſt it proceeds regularly,

comes at the proper time, and in due quantity, the patient in the mean time perceiving no inconveniency, no perceptions of declining health, ſuffers it to keep its courſe, without attempting to reſtrain it. Should the health in general ſuffer by it, the ſame means that ſucceed in leſſening immoderate diſcharges, may properly be applied in this caſe.

When the Menſes are about to go off, for the moſt part they appear irregularly, both in time and quantity; once in a fortnight, three, five, or ſix weeks, ſometimes very ſparingly, at other times in immoderate quantities.

Great loſſes of this kind are often prevented by taking away four or five ounces of blood, a few days after the firſt menſtrual ſuppreſſion. This prevents the accumulated blood from ruſhing with force upon the uterine veſſels at the enſuing period, and producing pain or a too copious hemorrhage. By degrees the occaſion for ſuch artificial evacuation diminiſhes, and the patient's health becomes firmly eſtabliſhed.

An opinion in favour of iſſues at this period of life, has occupied the minds of many patients; ſome with the hopes of preventing all future evils capable of proceeding from this cauſe; others with the terror of carrying about with them for life a drain which they think of with extreme diſguſt. Perhaps the uſe of theſe outlets deſerves ſome conſideration. When a patient has in early life been ſubject to cutaneous eruptions, ſore eyes, glandular ſwellings, or other obvious marks

of morbid humour ſubſiſting in the conſtitution, and all which may have diſappeared about the time the Menſes became regular, if no invincible oppoſition is made to it, a drain is now certainly adviſeable, and may prevent many inconveniences.

Should any cutaneous foulneſſes, any ulcerations, any fugitive pains of the cancerous or rheumatic kind, hardneſſes in the breaſt, or other parts, be evident, all ſuch complaints would probably be in part relieved by iſſues. But when none of theſe circumſtances appear, or have appeared, it ſeems ſcarcely reaſonable either to propoſe or permit a certain inconveniency, to call it by no harſher a term, in order to cure a diſeaſe that has no exiſtence.

It is neceſſary to enjoin, in many caſes, a moſt ſtrict attention to diet and exerciſe, to the full and plethoric eſpecially. Meat ſuppers ſhould be avoided as much as poſſible, and likewiſe much animal food, by thoſe who are liable to immoderate evacuations. If they could ſubſiſt two or three days in a week on pudding, vegetables, and things prepared from them, ſuch a method would contribute greatly to prevent not only theſe copious diſcharges, but various accidents that ariſe from plenitude, ſuch as palſies, apoplexies, fevers, and inflammations. Their liquors ſhould be regulated likewiſe by a ſimilar ſcale.

They ſhould avoid all heating exerciſe, frequenting large aſſemblies, or hot cloſe rooms, near

near the approach of the uſual period. In the intervals, exerciſe will be extremely neceſſary.

It will not be altogether foreign to this ſubject, to mention two caſes which now and then occur in practice, and ſometimes coſt both the patient and phyſician ſome perplexity.

A woman enjoying very good health, ſometimes is ſeized with a total ſuppreſſion of the Menſes, much ſooner than they ought to diſappear, perhaps ſoon after thirty years of age. A fever, ſurprize, anxiety, ſudden and violent cold, eſpecially if it happens at the time, will put a total ſtop to the diſcharge.

For many months, ſometimes a year or two, ſhe feels very little effect upon her health by this ſuppreſſion, perhaps grows plump, and ſeems diſpoſed to corpulency; by degrees, however, ſhe perceives herſelf not to be ſo well as uſual; ſhe is liable to colds, inflammations of the tonſils, eryſipelatous eruptions, rheumatiſms, but moſt commonly ſevere affections of the bowels, either inflammatory, bilious, or ſpaſmodic: one or other of theſe return frequently, and often violently, in ſix weeks, two months, or longer, but at no very regular periods; and in this manner continue to harraſs the conſtitution (if the perſon ſurvives the ſevere attacks of the colic or other diſorders incident to this ſtate) till about the time when the Menſes ſhould ceaſe ſpontaneouſly.

An attention to the cauſe of theſe diſorders ſupplies us with a natural and efficacious remedy.

Subſtitute at convenient diſtances artificial evacuations, inſtead of the natural one that is ſuppreſſed, and, if poſſible, previous to the diſorders to which the ſuppreſſion has given riſe; bleeding in ſmall quantities two or three times a year; moderate purgatives frequently exhibited; and, particularly, attention to their diet, which ought to be moderate and mild. At the firſt ſenſations of ſickneſs, or great heat and reſtleſſneſs, or pains beginning to affect the ſtomach or bowels, or any of thoſe ſymptoms which have uſually been the forerunners of the diſorders above mentioned, then is the ſeaſon for preventing thoſe difficulties which ariſe from this preternatural ſuppreſſion.

Another caſe likewiſe ſometimes occurs in practice, which it may not perhaps be improper to mention.

Women of an apparently healthy, ſanguine conſtitution, diſpoſed to corpulency, uſing little exerciſe, accuſtomed to live plentifully, perceive a ſudden ſuppreſſion of the Menſes, at a time of life when there is reaſon to expect many years continuance; from thirty-five years of age and upwards: in a little time they grow full, the belly ſeems to ſwell, with tenſive pains, pain in the breaſt, ſome enlargement of them likewiſe, ſome little ſickneſs in the mornings, diſlike to particular foods, and other ſymptoms ſimilar to thoſe of pregnancy; and married women are ſo fully ſatisfied of it, as to believe themſelves in this ſituation, and that they actually perceive the motions of the child.

This

This circumſtance happens moſt commonly to thoſe women who have been married rather late in life, *viz.* between thirty and forty. Their inexperience leads them to take up with the opinions of thoſe about them, and they are ſometimes not undeceived till the time of geſtation is much exceeded.

Women alſo who have been long married and had children, ſeveral years after the Menſes ſtop, ſuddenly they grow bigger, ſuſpect pregnancy, and treat themſelves accordingly; abſtaining from exerciſe, eat what their appetites, often craving and depraved, require, till they have exceeded their reckoning, ſo long as to be ſure they have been miſtaken.

The like complaint happens now and then likewiſe to ſingle women about the age of forty, or near the time when this evacuation ought to ſtop. The belly grows large, they become unwieldy, their legs ſwell, and the apprehenſion of a dropſy brings on a variety of complaints. The hemorrhoids are commonly the attendants of all theſe ſubjects. Sometimes one may trace out ſome probable cauſes from which this preternatural ſtate may probably be derived, but not always clearly. The proper treatment is, however, not difficult to diſcover. The general turgeſcence, though it proceeds primarily from a retention of the Menſes, does not appear to be confined to the uterine veſſels alone; all the venous ſyſtem of the lower belly is affected; the lymphatics alſo, in conſequence of the general oppreſſion. The

legs

legs often ſwell, the piles are almoſt always troubleſome, the patients are generally coſtive, the urine in ſmall quantities and often diſcharged, and all the thinner ſecretions diminiſhed. Yet the countenance and appearance of the whole habit denote a general plenitude, but very different from the bloated body of an hydropic. Repeated bleeding in ſmall quantities always gives relief. Sulphur and magneſia, or other eaſy laxatives given conſtantly, prevent the piles, and keep the belly gently open. Regular exerciſe on horſeback, or in a carriage, is quite neceſſary to effect a cure, which is for the moſt part ſlow and tedious, but in general certain. Purgatives approaching to the draſtic kind are often injurious, and ſo are copious evacuations by bleeding, though ſmall ones are eſſentially neceſſary. Their diet ſhould be light, but not too liquid. By means like theſe the general fulneſs gradually ſubſides; they ſeldom have any return of the Menſes, except now and then ſome ſlight intimations.

Permit me to mention another caſe, which, though it does not abſolutely relate to the preſent ſubject, is not quite foreign to it. Nothing, perhaps, is more excruciating to the patients, nor in common more difficult to cure, than painful menſtruation; it impairs their health at preſent, and ſeems to render them leſs prolific in future: to the ſufferers it is a moſt ſerious evil. By the following ſhort proceſs I have been happy enough to relieve ſeveral. Let the patient

tient have by her a few pills, conſiſting of *extr. theb. gr.* j. each, made ſoft with a little of any kind of conſerve. She is to take one of theſe pills the moment ſhe finds the pain attending this diſcharge coming on. A pill may be taken every hour till the pain goes off: they ſeldom require more than two of theſe pills; one is often ſufficient, if given early; and it ought to be a conſtant rule obſerved in adminiſtering anodynes, to give them, when they are plainly indicated, early. It requires much leſs of an opiate to obviate pain, than to quiet it when acute.

Let the patient keep either in or upon the bed, at leaſt in a recumbent poſture; let her drink moderately of any diluting liquor, and of the herb teas, weak whey, thin broth, or what elſe her conſtitution may particularly require.

When the time is paſt, a courſe of chalybeate bitters, in ſmall doſes, may be continued till within a few days of the return; and the belly ſhould be kept open by ſome proper laxative; two or three grains of *cathart. extract.* with half the quantity of *calx antimonii illota*, taken every night, will often ſucceed perfectly well. The anodyne muſt ſtill be in readineſs to take when the pain comes on, and to be taken to ſuch a quantity as to mitigate the pain, let the doſe be what it may.

This excruciating pain ſeems to be ſpaſmodic, and to proceed from the extreme irritability of the uterine ſyſtem: the blood naturally determined hither, in order to its being diſcharged, by

by diſtending the very irritable veſſels, occaſions the ſpaſm; this produces a conſtriction of the veſſels; they become impervious, and the niſus to the diſcharge continuing, the pain becomes exquiſite and general, till the patient, worn out with the ſtruggle, is debilitated and ſunk; the fluids are then diſmiſſed, ſome eaſe ſucceeds, but the patient is often ſo reduced as not to recover her uſual ſtrength before ſhe has another conflict to undergo.

The *fluor albus* is frequently the conſequence of this ſtruggle, and it would ſeem as if the *uterus* itſelf was ſo far a ſufferer as to be rendered by degrees leſs fit for fecundation. I think it has been obſerved by other phyſicians, as well as myſelf, that few of thoſe who have ſuffered much in the manner here deſcribed, have borne children.

THE

THE

CASE OF A HYDROPHOBIA*.

I SHALL introduce what I have to say upon this Case by an account of what happened before I saw the patient, as it was drawn up by W. French, his apothecary.

" Mr.

* This paper, which was originally published in the *Med. Obs. & Inq.* vol. v. p. 195. an. 1774, was afterwards reprinted in the form of a pamphlet, with the following Introduction, and Additional Observations. *Editor.*

" I HAVE been solicited to reprint the following Case, " that it might pass into many hands where the work in " which it was first inserted may never come. I yielded to " this solicitation the more easily, when I found that neither " the Society to which it was presented, nor the Bookseller " whose property it is, had any objection to its being pub- " lished in this manner.

" The reader must not expect to find in it a cure for the " Canine Madness. He will find, perhaps, nothing more " of certainty in this respect, than that ALL the remedies " hitherto proposed, either as preventatives or cures, are " found by experience to be altogether ineffectual.

" To rely on any popular means of preventing the fatal " effects of this poison, whether known and generally di-

" vulged,

" Mr. CHARLES BELLAMY, of Hol-
" born, aged forty years, on the 14th of Fe-
" bruary 1774, was bit by a cat, which was killed
" the ſame morning.

" The day after, viz. February 15th, he took
" the celebrated Ormſkirk medicine, ſold by Hill
" and Berry, in Hill-ſtreet, Berkley-ſquare, and
" conformed to the directions given by the
" vender in every reſpect.

" A ſervant-maid, who was bit in the leg by

" vulged, or preſerved as ſecrets, which, as the Tonquin
" medicine, are found to be incompetent and ineffectual,
" is a dangerous deception.

" Were it only to give one incontrovertible fact in evi-
" dence againſt ſuch pretenſions, and of courſe to ſtimulate
" the faculty to make a farther ſearch after more effectual
" relief in this diſtemper, it would be doing ſome ſervice to
" ſociety.

" Dr. Vaughan of Leiceſter has lately publiſhed ſome
" caſes of the Hydrophobia, which in divers reſpects confirm
" the intimations given in the cure referred to. And the
" very rational, though unſucceſsful, efforts he made to
" aſſiſt his patients under this calamity, are proofs of his
" attention, and of the hitherto untameable nature of this
" ſingular poiſon.

" Let not, however, theſe difficulties diſcourage us from
" obſerving every caſe that occurs with attention, and faith-
" fully noting every incident that ariſes in the progreſs of
" the diſeaſe: perhaps the united labours of the faculty,
" Providence permitting, may, at length, diſcover ſome
" effectual remedy.

" To this Caſe are ſubjoined ſome Remarks on the Ca-
" nine Madneſs and Hydrophobia, with a view to aſſiſt thoſe
" who are called in upon theſe occaſions, to perform their
" duty with ſatisfaction to themſelves, and advantage to their
" patients."

" the

" the same cat, just before her master was bitten,
" took the same remedy.

" About the middle of April he complained
" of a pain in his right knee, which he supposed
" was affected with the rheumatism; he had felt
" the like pain at times during the last two years,
" and had procured himself ease by pumping
" cold water on the part. On the 7th of June,
" this complaint increasing, he desired me to at-
" tempt something for his relief. I accordingly
" sent him a box of pills, two of which were to
" be taken every night, containing about one
" grain of calomel, of camph. ipecac. and *pill.*
" *sapon.* two grains each, and two tea-spoonfuls
" of Huxham's tincture of the bark in buck-
" bean-tea twice a day.

" After having taken these medicines about
" six days, he discovered an unusual titillation
" in the *urethra*, a contraction of the *scrotum* and
" *penis* to a degree of pain, and an emission of
" *semen* after making water, to which he had fre-
" quent calls.

" Alarmed at these symptoms, which he at-
" tributed to his medicines, he was desired to
" discontinue them, and to live as temperately
" in every respect as possible.

" On Thursday the 16th of June, he sent for
" me in the morning, complained much of hav-
" ing had a restless night, and told me, though
" he had eat some bread and butter as usual for
" his breakfast, yet he found he could not swal-
" low his tea without difficulty; he attempted

" it before me, and threw a little into his mouth,
" but with the utmoſt agitation.

" Recollecting the accident of the bite, and
" apprehending the moſt ſerious conſequences,
" but without diſcovering my apprehenſions to
" the patient, I propoſed a phyſician might be
" ſent for. Dr. Fothergill was mentioned by the
" patient. I met the Doctor in a few minutes
" after, and informed him of the preceding cir-
" cumſtances, and attended him to the place.

W. FRENCH."

Theobald's-Road,
June 20, 1774.

I ſaw the patient above mentioned the 16th in the morning: he was ſitting in his dining-room, without any other appearance of indiſpoſition than a little paleneſs; his countenance chearful; nothing that diſcovered uneaſineſs or anxiety. He recited very diſtinctly the complaints which he called rheumatic, and which had induced him to apply for help; mentioned his opinion, that his diſorder had been increaſed by the pills, &c. but upon being informed, they could have no ſuch effects, he readily gave up the point. " I
" have had (ſays he) a very reſtleſs night; my
" head has been much out of order; I have
" ſweated a great deal, was very faint with it,
" and have had little or no ſleep: I was ex-
" tremely thirſty in the night, and intended to
" have regaled myſelf this morning with a large
" draught

" draught of baum-tea, which ſtands there ready " made; but you ſhall ſee the difficulty I am " under, and which induces me to aſk your aſ- " ſiſtance." He then took up a tea-cupful of common green tea with milk in it, as he drank it commonly for breakfaſt, and brought it within a few inches of his lips with great compoſure: he then threw the liquor into his mouth, and ſwallowed it with uncommon haſte and perturbation. " You ſee (ſays he) I can force it down; " ſhall I do this very frequently, or will you al- " low me to omit it a while?"

It may be proper in this place to mention, that our patient was a perſon of a good underſtanding, active, diligent, and ſenſible, much eſteemed for his probity; and during his illneſs he gave proofs of a capacity and reſolution ſuperior to moſt men in the middle ſtations of life.

I deſired him to forbear the attempt, while it continued to affect him with extreme uneaſineſs, but to endeavour to get down bread moiſtened with any liquor he choſe as often as poſſible. The thought pleaſed him, and he got down bits of bread moiſtened with wine without much difficulty, whilſt I ſtaid, and continued ſo to do frequently during the day; and this was the only kind of nouriſhment he got down.

He had naturally a lively, penetrating eye; but his aſpect varied frequently and remarkably during our converſation. His pulſe was generally about ninety, and rather hard, but changed almoſt every minute, both in frequency and hard-

neſs. His fleſh felt moderate, his tongue dry; he made very little urine, and complained much of the contraction of the *ſcrotum*; the emiſſions had almoſt ceaſed, and his bowels had been ſufficiently emptied the preceding morning.

He took not the leaſt notice of his having been bit to me, nor did he appear to have recollected it during the courſe of his illneſs.

We forbore, on this account, to inquire after the ſtate of the wounded part, or to ſay any thing that might lead him to ſuſpect his preſent complaints aroſe from that fatal accident.

To gain a little time for reflection on a caſe ſo ſudden and ſo dangerous, and that nothing which ſeemed reaſonable to be done might in the mean time be omitted, I ordered ſix ounces of blood to be taken from the arm; that a ſcruple of native cinnabar, and half a ſcruple of muſk made into a bolus, might be given every four hours; and that as much nouriſhment, fruit, or any thing he choſe, might be got down, as poſſible.

The family were appriſed of the dangerous ſituation he was in, and a conſultation requeſted as early in the evening as might be convenient. Dr. Watſon was pitched upon; we met at five in the evening, the 16th, and received the following account:

He had taken two of the boluſes, had got down ſeveral bits of bread moiſtened with wine, ſome ſtrawberries, a few bits of pudding, but had not attempted to drink any liquor. We requeſted he would then, for our ſatisfaction, endeavour to

ſwallow

ſwallow a little liquor: he readily aſſented; it was brought to him; he threw it haſtily into his mouth, and ſwallowed it with difficulty and extreme perturbation; the moment the liquor touched the *gula*, all the muſcles concerned in deglutition appearing to be convulſed.

He repeated to Dr. Watſon, very intelligibly and fully, the account which he had given me in the morning. His countenance was pale, and he ſeemed much agitated and diſtreſſed; complained of extreme thirſt, and of the impoſſibility of ſwallowing any liquid. His tongue was white, but did not appear dry. He was perpetually endeavouring, with great efforts, to bring up and diſcharge the viſcid, tenacious phlegm which lined the *fauces*.

The heat of his fleſh was moderate; but his pulſe was quick, hard, and irregular; ſtrong palpitations of the heart, which he made us feel by preſſing our hands to the part.

He was perfectly ſenſible; and, when his endeavours to diſcharge the viſcid phlegm would allow him to ſpeak, gave us pertinent anſwers. He had made but little urine ſince the morning; the dragging, as he called it, of the *ſcrotum* ſtill continued, and the uneaſy ſenſation and emiſſion.

The blood which was taken away in the morning had ſome ſlight appearance of inflammation, the *craſſamentum* firm, with ſlight traces of ſize, but the *ſerum* remarkably yellow. No evacuation by ſtool to-day. Upon the whole, it

was evident, that the diſorder had increaſed ſince morning.

Upon maturely conſidering this very hazardous ſtate of things, we agreed upon the following proceſs:

To procure a ſtool or two by means of a clyſter:

That he ſhould then be carried to the warm bath, and remain in it ſo long, and to ſuch a degree of heat, as was moſt agreeable to himſelf:

That at his return a clyſter ſhould be given of a pint of milk and water, and this to be repeated as often as it could be conveniently adminiſtered:

That in the laſt of theſe clyſters a drachm of Dover's powder ſhould be exhibited:

That two drachms of ſtrong mercurial unction ſhould be rubbed by himſelf on his legs and thighs as ſoon as he returned from the bath, and that he ſhould endeavour to get down all the ſuſtenance he could.

We ſaw him early next morning, the 17th, when we received the following account:

The laxative clyſter had produced a proper effect.

The warm bath relieved him greatly whilſt he was in it, ſo that for a time, as he expreſſed it, his ſufferings were ſuſpended. They returned, and with more violence, during the night. The clyſters had been repeated ſeveral times, and the unction applied.

We

We found he had paſſed a moſt reſtleſs night, totally without ſleep, and in much agitation, not being able to lie ſtill a moment.

His countenance beſpoke much diſtreſs, though accompanied with endeavours to conceal it; ſometimes he was calm, then agitated; talked much, but ſenſibly. He had now a copious flow of ſaliva leſs viſcid; his tongue white and moiſt, but foul. His pulſe was very quick, ſmall, hard, and irregular; his hands rather cold than hot. He had made water in the night with leſs difficulty, and without its uſual conſequences; the dragging pain, or ſpaſmodic affection of the *cremaſter*, was gone off. In general, his ſtrength and faculties ſeemed leſs impaired than might have been expected, where ſo little ſuſtenance had been taken in; and there was conſtant reſtleſſneſs, and no ſleep.

On conſidering theſe circumſtances, and obſerving there was a more copious flow of ſaliva, the tongue more moiſt, the thirſt leſs, the ſpaſm of the *cremaſter* gone, yet that the difficulty in ſwallowing was not leſs, and ſtill no ſleep, though his head was clear:

That his pulſe continued hard and quick; that there were ſome appearances of an inflammatory denſity yeſterday; that he had found relief from the bath, at leaſt a temporary ſuſpenſion: We agreed,

That he ſhould be blooded ſtanding, according as his ſtrength would bear:

That he ſhould be conveyed to the warm bath,

and remain in it as long as he found it agreeable to himſelf:

That a clyſter of milk and water ſhould be thrown up at his return from the bath, with a drachm of Dover's powder; and

That half an ounce of mercurial unction ſhould be rubbed on his legs and thighs as ſoon after as might be done conveniently.

One ſcruple of *thebaic. extr.* was ordered to be made into twenty pills, three of theſe to be given when he came out of the bath, and two every hour, till he ſeemed diſpoſed to ſleep.

At five in the evening we viſited him again, when he received us with the utmoſt tranſport and joy; and deſcribed in very ſtrong terms the pleaſure and the benefit he received from the warm bath, and the hopes he now conceived of a ſpeedy recovery.

A vaſt quantity of viſcid phlegm was continually flowing into his mouth, which he was as conſtantly employed in diſcharging; for it ſeemed to have the ſame effect upon the organs of deglutition, as if he attempted to ſwallow any other liquor, and gave him extreme uneaſineſs. To get rid of this defluxion, the moment he felt it in the *fauces*, he exerted a ſudden and vehement expiration, as if it was with a deſign to blow away the moiſture ſo offenſive to him, with the utmoſt force and expedition. This occaſioned a ſound, which did not ſeem very remote from the hollow barking of a dog.

When he was not employed in theſe efforts,

he was talking constantly but coherently. His eyes had a particular keenness, and all his motions were quick and vehement. His pulse was also quick, hard, sometimes trembling and irregular. His hands were rather cold and clammy, but the general heat of his body not intemperate.

He told us he had taken a great deal of nourishment during the day. On inquiry, we found it amounted to no more than on the preceding; a few bits of bread moistened with wine, a little pudding, two or three pieces of china orange, which pleased him much. He had taken none of the pills.

Previous to his going into the bath, he desired to be shaved; it was readily assented to, but proved a more troublesome operation than he was aware of. The moment the lather touched his face, he fell back with surprize; but the part being once wetted, he bore the repetition easily; every fresh part that was lathered gave him considerable emotion; the application of the razor had in a degree a similar effect: in short, every new movement about him gave him some fresh alarm, some degree of agitation and anxiety. He took notice of this himself; "but (says he) "I am naturally hasty and choleric; and when "I am got better of these complaints, I hope "you will assist me in correcting it."

Whilst he was in the bath, the person who attended him, without any particular intention, took up some of the warm water in his hand, and poured it on the patient's head and face:

this confused him much; he described to us the distress it gave him at the time very emphatically; and added, with much apparent satisfaction, that he had so far conquered his aversion to it, that he had poured water on himself with his own hand in the same manner.

It was in speaking of this affair he mentioned the term *Hydrophobia*; observing, that his complaints resembled it; yet without giving us any reason to apprehend he had the least idea of his actually labouring under this fatal distemper.

He had not slept a moment from the time he was seized with the dread of liquids. He repeatedly expressed the satisfaction he received from the bath, and wished to go into it again. We consented, and desired that he might be carried thither again, and to stay in it as long as he chose.

Every new operation now became an extreme difficulty to him; dressing, undressing at the bath, going into the water, which he now did with much intreaty, putting one foot in, and hastily withdrawing it. He was at length prevailed on to go into it. A recollection of the ease he had enjoyed in it before, aided by a manly resolution that never forsook him, subdued his fears, and he remained in it near half an hour. He was brought home about nine o'clock. He refused to take the pills, and every other medicine. He grew fretful and restless, soon became delirious, but offered no violence.

After remaining in this condition about two hours,

hours, the powers of nature ſunk, he reclined his head gently on the pillow, and expired at half paſt twelve.

Endeavours were uſed to obſerve the condition of the part that was bit, when he was dreſſing after bathing, as far as could be done without alarming him; but ineffectually. After death it was examined with attention, but without perceiving the leaſt morbid appearance.

For this account of his laſt hours, and his behaviour at the bath, I am obliged to my friend, William French, his apothecary, who attended him with the utmoſt conſtancy and humanity.

During our attendance, we learned that this accident happened in the following manner:

The ſervant-maid having occaſion to waſh, roſe earlier than was uſual: upon her entering the waſh-houſe, a cat attacked her, and fixed upon her leg. Her ſcreams brought her maſter to her aſſiſtance; he aimed a blow at the cat, but miſſed it; the cat then ſeized his leg, but he ſoon diſengaged himſelf from her; a chairman paſſing by was called in, who ſoon killed her.

Both the maſter and maid took the Ormſkirk medicine as ſpeedily as poſſible, and obſerved the directions given with it. The maſter's leg ſoon healed, and he ſeems to have thought no more of it. Perhaps fortunately for the girl, her leg did not heal; it grew worſe, and baffled the ſkill of a young ſurgeon to whom ſhe applied. We were told ſhe afterwards got into one of the

city

city hoſpitals on this account, and we have no doubt but ſhe is ſtill living. Our endeavours to find her out, and to know in what ſituation ſhe is, have not yet been ſucceſsful *.

It is here worth obſerving, that two perſons are bit by a mad cat, at the ſame time: the firſt who was bit, and the moſt ſeverely, eſcapes; the ſecond loſes his life. The wounds of one healed preſently; the other became a ſore, notwithſtanding endeavours to the contrary. Both uſed the ſame preventive means.

May not then the happy eſcape of the girl be owing to the ſore which followed from the bite? It ſeems probable; and affords a very forcible argument for enlarging the wounds made by the bite of mad animals, and promoting a diſcharge from them as long as poſſible. Perhaps this is the only ſure preſervative againſt the direful effects of this malignant venom we are yet acquainted with.

It is with ſome repugnance we point out the inefficacy of a medicine, which in this country has eſtabliſhed a reputation of its being an infallible preſervative. Perhaps it has had its uſe in being ſo eſteemed by the generality; for it is undoubtedly true, that many perſons have ſuffered almoſt as much as they could have done from the moſt poiſonous bite, by repreſenting to themſelves the miſeries they were expoſed to. A medicine that could powerfully aſſuage theſe appre-

* I have ſince learned that her leg continued long in a ſore ſtate, but that ſhe is now perfectly well, Aug. 29, 1774.

henſions,

henſions, from a general opinion of its ſalutary effects, has certainly been beneficial to many; and ſo have a multitude of other famed prophylacticks.

But as this medicine, which has ſurvived the reputation of many others, has in this inſtance been found to be ineffectual; it ſeems to be abſolutely neceſſary to apprize the public of the fact, which, as far as one evidence can extend to, is deciſive: The ſame medicine procured by an unexceptionable hand (the apothecary, who urged its being given, from a thorough perſuaſion of its affording perfect ſecurity) from the place authoriſed to ſell it; and given preciſely according to the preſcriber's directions, to two perſons bit by the ſame animal, and at the ſame time; the perſon firſt bitten eſcapes, the ſecond dies of the *Hydrophobia*.

Was it not of the laſt conſequence to thoſe who may become the unhappy objects of ſuch applications, to be informed that even this medicine had failed of ſucceſs, we ſhould not endeavour to bereave them of the comfort which the unfortunate might derive from an opinion that it was infallible; but when there is ſuch evidence to the contrary, it becomes neceſſary, for the public benefit, to endeavour to remove prejudices that may be fatal to the real ſafety of individuals.

To inquire farther into the merits of this, or any other preſervative againſt the poiſonous bite of mad animals, would take up too much room in

in your collection. This, however, would be no unprofitable employment for a perſon of ſuitable leiſure and abilities; and we are not leſs in doubt about the efficacy of all thoſe remedies which have been urged by the ſeveral propoſers, as extremely beneficial in the cure of this diſtemper, even in its laſt ſtages. We are confident that divers have been mentioned as being cured of the effects of ſuch bites, who never had one genuine ſymptom of the diſeaſe thence ariſing.

At the ſame time that we ſuggeſt opinions which may tend to deſtroy that happy confidence which has prevented much ſuffering to individuals; and whilſt we own our apprehenſions that none of the celebrated medicines hitherto propoſed to the public can ſafely be confided in, either as prophylacticks or as curatives; we would earneſtly recommend one means of preſervation, which not only the preſent inſtance before us, but extenſive experience ſeems to eſtabliſh upon a ſolid foundation; that is, after having waſhed the part, and cleanſed the ſurface as quickly as poſſible from the poiſon, to enlarge the wound immediately by actual cautery, the knife, or any other ſpeedy and effectual method; and to promote the diſcharge as long as is poſſible. This being effectually done, affords the ſureſt ground for a proper confidence and ſecurity againſt future miſchief.

Two circumſtances we take the liberty to ſuggeſt, as deſerving ſome attention.

The firſt is, In caſe of a bite from a mad animal,

mal, to recollect what part was bit, and, if through any, through what kind of covering. A bite through thick garments, or leather, as the teeth of the animal would probably be wiped quite clean from the venom, ought to give leſs uneaſineſs than when it happens to the naked ſkin.

Second, Not to kill the animals, if it can be avoided, till it is paſt a doubt they were mad. On both theſe circumſtances may depend conſiderable ſatisfaction to the perſon bit; and it may not be improper to add, that there is abundant reaſon to ſuſpect that very few of thoſe who are bit by mad animals are liable to be affected by the *Hydrophobia*, or other fatal effects of the bite. This, however, is not intended to abate the care that is due on theſe occaſions, but as a proper antidote to that deſpondency which is often the conſequence of this accident.

In reſpect to our conduct in the preſent caſe, it is ſubmitted to your cenſure. We acknowledge we deſpaired of our patient's recovery. If we kept partly in the track our predeceſſors had recommended, as circumſtances admitted, ſo far we were juſtified: but we went further, we purſued ſuch means as we thought moſt likely to have one of theſe deſirable effects; to keep up the forces of life, by conveying into the habit every kind of nouriſhment by the paſſages left open, *viz.* the bowels and the ſkin, and thereby enabling Nature to ſupport the conteſt longer; or elſe, to calm and relax, and render the conflict

flict at laſt leſs terrible to the aſſiſtants, and leſs painful to the ſufferer.

We thought ourſelves juſtified, from conſidering the ſtate of the pulſe, and other circumſtances, to take away ſome blood, and repeatedly. That we might not reduce the ſtrength beyond what appeared neceſſary, we choſe to order it to be taken from the patient ſtanding; becauſe, we were ſatisfied, he could not loſe ſo much blood in that ſituation as would be detrimental without fainting, much ſooner than he would have done in a ſitting or decumbent poſture.

ADDI-

ADDITIONAL DIRECTIONS

FOR THE TREATMENT OF

PERSONS BIT BY MAD ANIMALS.

1ſt, PREVENT the animal ſuppoſed to be mad from being killed, if poſſible, till it is paſt a doubt, that by refuſing ſuſtenance in any form, and other circumſtances uſually accompanying this ſtate, it is evident the creature is mad. Let all poſſible care, however, be taken, in the mean time, that he be confined in ſuch a manner as to injure no other animal. This attention, though it does not contribute to the cure, it may to the comfort of the patient.

2d, Obſerve whether the wound is made through any covering, and of what kind; as much ſatisfaction may be afforded to the patient, if the wound was made through thick clothing or leather.

3d, Remove the ſlavered cloths as ſoon as poſſible, and waſh the wounded or bruiſed parts with

with water; in which if a little ſalt is diſſolved, it can do no harm.

4th, Conſider in what manner the wounded part may be treated, ſo as to keep it diſcharging as long as poſſible. If in a fleſhy part, and the patient will ſubmit to it, exciſion of the wounded part is the beſt ſecurity from danger.

Where this operation cannot be admitted, the actual cautery, the lunar cauſtic, a veſicatory, may be applied with advantage, according as the part, the age of the patient, and the ſituation may direct. In every caſe let the wound be kept open as long as it can be done conveniently. A ſmall quantity of gunpowder, a little moiſtened, ſpread upon the part, if only ſcratched by the teeth of the animal, or put into the wound if large enough to receive but a little, and then kindled with a lighted paper, will, perhaps, as ſuddenly, as eaſily, yet ſafely enlarge the wound, as can be effected by any other means, and occaſion ſuch a kind of wound as will not inſtantly be cloſed.

The choice of theſe ſeveral methods muſt be left to the operator. Wounds in the hands, feet, or face, will not admit of the injured parts being cut out ſo ſafely, as may be done on the muſcular parts of the arms and legs.

The time, likewiſe, of keeping the wounds open muſt in ſome reſpect depend on their ſituation. To keep open a running ſore for a long time on the face and hands would be difficult, and productive of various inconveniences.

Of

Of all the prophylactics yet offered to the public, experience has proved there is not one to be depended on; it may, perhaps, be worth while to conſider in this place the means of prevention principally in vogue.

When a perſon is bit by a mad animal, the firſt thing uſually thought of is, Sea Bathing. The party is ſent to ſome bathing-place, where there are commonly perſons employed in this buſineſs, who, by keeping the patient long under water, and dipping him repeatedly, reduce him almoſt to a ſtate of ſuffocation. Some of the ſalt water gets into the *trachea*, more into the ſtomach, and proves ſometimes a briſk purgative. Here the proceſs ends, and the patient is deemed to be ſecure from any future accidents on account of the bite.

The reader will have obſerved in the preceding caſe, that the whole of this proceſs is founded on miſtake, and it is certain that divers who have undergone the utmoſt ſeverity of this diſcipline, have died of the *Hydrophobia*.

The *Pulvis Antilyſſus* of Dr. Mead has had no better ſucceſs, and is now almoſt wholly forgot.

No medicine, as a preventive, ſeems to have maintained its credit ſo long as that called the Ormſkirk remedy. It is called ſo from the name of a town in Lancaſhire, near which the gentleman lived in whoſe family the ſecret has been long preſerved, and from thence diſtributed with ſuch apparent ſucceſs, as to be generally deemed infallible for preventing the Canine Madneſs. I

am ſorry there are more inſtances to the contrary, than that which is related in the preceding account.

The Tonquin medicine, compoſed of Muſk and Cinnabar, has been equally unſucceſsful. All theſe different medicines have been employed by practitioners, and all of them have failed.

Dr. James, who had great credit amongſt ſportſmen, and great opportunities of obſervation, thought Turbith emetics and mercurials certain antidotes; but theſe, likewiſe, have had the ſame fate with others; they have been neglected, not becauſe their promoters were no more, but becauſe they were found to be inſufficient.

His practice, however, and ſome other publications, turned the attention of phyſicians to mercurials, and they have of late been conſidered as the moſt certain antidotes to the Canine Madneſs. We gave them a ſhort, though ineffectual trial. Others have been more bold, but not more ſucceſsful. There is too much reaſon to diſtruſt their efficacy in preventing or curing the *Hydrophobia*.

Notwithſtanding theſe diſcouragements, there is one thing which ought to afford the ſufferers ſome conſolation; which is, that it appears very evident, that if no means of prevention were uſed, many of thoſe who are bit by mad animals, would never be liable to the fatal conſequences of Canine Madneſs.

On the other hand, it is more than probable, from

from divers accounts, which have been publiſhed, that perſons of timid and anxious diſpoſitions, who have been bit by ſome animal, even without any proof of its being mad, have imagined themſelves affected with every ſymptom of Canine Madneſs they have heard of, deſcribed their complaints as ſuch, were treated accordingly, and cured of a diſeaſe that had no real exiſtence.

It is, therefore, a matter of no ſmall moment to the practitioner, as well as to the patient, to have all theſe circumſtances in contemplation; and whilſt the former is neglecting no means, which either the experience of others, or his own judgment, have induced him to think are conducive to ſecurity, the patient ſhould be confirmed, by every juſt and reaſonable argument, in an opinion of their efficacy.

After taking this ſhort view of the means recommended to us as preſervatives againſt the fatal effects of this poiſonous bite, and having ſeen too much reaſon to conclude them ineffectual, it is with regret I acknowledge myſelf unacquainted with any method of treating the *Hydrophobia* more ſucceſsfully, or even of leſſening the diſtreſs with which it is accompanied farther than has been already propoſed.

The firſt ſymptom of the *Hydrophobia*, which is a dread of all liquids, cuts off in an inſtant a great part of the means of relief by internal remedies. It is with great difficulty that medicines of any kind, or in any form, after a day or two have elapſed, can be got down.

The caſe which Dr. Watſon and myſelf attended, concluded, like all the inſtances of the genuine *Hydrophobia* on record, fatally. Had we the ſame ground to go over again, for my own part, I confeſs I know not of a more reaſonable plan. I would not, however, diſcourage others from purſuing their own ideas: ſome fortunate event may, at length, make us better acquainted with the nature of this poiſon, and point out a ſpecific remedy.

Should another accident of the like nature occur, until we are directed to a more rational and ſucceſsful method, I ſhould ſtill be inclined to purſue a plan ſimilar to that which we laid down in our treatment of the caſe before deſcribed. Its baſis was, to prevent the loſs of ſtrength as much as poſſible, in order to gain time, and afford the beſt chance of relieving the patient. In this diſeaſe we are early precluded from the uſual means of effecting this purpoſe, as the patient ſoon finds himſelf incapable of ſwallowing any kind of nutriment in a proper quantity, as hath been already mentioned.

Two methods, however, ſtill remain of aſſiſting the patient, though imperfectly. Firſt, by clyſters. By this means, a large quantity of aliment may be ſupplied. Broth, milk, eggs, in various ſhapes, may be exhibited in ſmall quantities, that they may be retained, whilſt larger promote their own rejection.

Secondly, by baths. It is probable that by this method large ſupplies of fluids may be introduced

troduced into the habit, by means of the abſorbent veſſels, placed on the ſurface of the body every where.

Whether any uſeful additions can be made to warm water, can be determined only by experience. Perhaps broth, moderately ſalted, with the addition of aromatic herbs, might be uſed alternately, with warm water, to which may be added a handful or two of that compoſition ſold by the perfumers under the name of *Pot Pourrie*, and a proportion of Bay Salt, ſufficient to make it nearly equal to ſalt water, or about twelve ounces to every four gallons.

Whatever bath is made choice of, the patient ſhould continue in it as long as it is eaſy to him, and in a degree of heat that he bears with pleaſure, perhaps from 80 to 86 degrees of Fahrenheit's thermometer. The patient may be wiped dry, put into a warm bed, a clyſter given of half a pint of broth, with a raw egg beat up in it; and both this and bathing be moſt induſtriouſly repeated.

From the trials made with opium, it does not appear, that this drug has had any beneficial effects. It is difficult to get it down in any quantity at the time we moſt want it, in any ſhape. By clyſters it may be given, had we any reaſon to conclude it would be beneficial. In regard to its external application, I am perſuaded from experiments, that if the ſkin is whole, opium never produces any ſoporific effects.

Applied as a plaſter, or a cataplaſm, it will pro-

duce the ſame effect as any ſimilar plaſtic ſemi-reſinous ſubſtance, and no more. In tincture, it will act as ſpirit would act, impregnated with ſuch a kind of ſubſtance, void of all anodyne quality, and in no other way. Half an ounce of opium ſoftened into the form of a poultice, and applied to the belly of a healthy new-born infant, did not produce the leaſt anodyne effect. The like trial has been made with Mithridate, Venice Treacle, and Laudanum, and with the like reſult. In a diſeaſe ſo ſwift in its progreſs, it is of conſequence to know what *will not be efficacious*. It compels us to look around for other auxiliaries.

If mercurials can be of uſe, it would ſeem that the ſteam of cinnabar would be worth a trial. By this means it would be practicable to impregnate the air in which the patient breathes, ſhould he be incapable of admitting the fume in the uſual mode into the *fauces*, ſo as to produce the effects of mercury on the parts affected the moſt ſpeedily.

When the patient comes out of the warm bath, the mercurial ointment may be applied liberally. I am afraid it will be found as ineffectual as the other means hitherto made uſe of; but in caſes like this, it is better to try a medicine of whoſe efficacy there may be ſome doubt, than none at all.

In reſpect to bleeding, I have only one thing to obſerve. If the patient is bled ſtanding, till he ſhews a diſpoſition to faint, it may be done

without hazard; it may abate a little of that inflammatory diſpoſition, which is the conſequence of continued irritation.

It would, perhaps, at length contribute to remove this uncertainty, if thoſe who are applied to on theſe intereſting emergencies, would conſider themſelves as obliged by the honour of their profeſſion, and the ties of humanity, to note with all poſſible preciſion and impartiality every incident in the progreſs of this diſeaſe; and, whether they purſue the hints here ſuggeſted, or take up more rational ones from their own ſtore, would communicate the reſult to the public. By this method the field of conjecture would be contracted, and our ſucceſſors directed to new objects of inveſtigation. The reſult would be not leſs honourable to thoſe who engage in the ſearch, than beneficial to mankind in general.

CASE OF AN ANGINA PECTORIS,

WITH REMARKS*.

IN the autumn of 1773, I viſited R. M. Eſq; a gentleman aged about fifty-eight, of a ſize above the middling, his complexion rather fair and ſanguine than ſwarthy, plump and full, diſpoſed to corpulency, but not ſo as to render him unfit for any kind of exerciſe.

For the moſt part he had enjoyed very good health during the greateſt part of his life, which was active, regular in common, temperate as to liquors, a good appetite, and accuſtomed to a plain but plentiful table, as I was informed by my friend and neighbour W. Fowle, who attended him as his apothecary, and gave me the following account:

"He was ſeized about the year 1770 with a remarkable giddineſs, which was at times extremely troubleſome to him, and never left him

* Medical Obſervations and Inquiries, vol. v. p. 233. ann. 1774.

entirely,

entirely, though the intervals of the severer attacks were frequently pretty long. For this complaint he had at first a blister on his head, which was kept open several months; and afterwards had one upon his back, which was also kept open a good while. He took at different times valerian, with salt of hartshorn, *lac ammoniacum*, decoction of the bark with valerian; but, excepting the blisters, nothing appeared to give him any material relief.

"In July 1773 he was attacked with a spasm in the breast, which at first affected him only when he used exercise, and chiefly when he walked up hill. I desired him to apply a small blister to his stomach, and to take a quarter of a pint of buckbean-tea twice a day. The blister gave him great pain, and he was obliged to let it heal very soon. The buckbean-tea did him no good. I then gave him the gum-pill and guaiacum, mixed up with *Balsam. Peruv.* He took the pills morning and evening, and washed them down with the camphorated julep, to which was added some simple tincture of valerian. These medicines at first appeared to do him some good; but the disease shortly after returned with greater violence, when you was consulted; and he died the 10th of May following."

I soon found there was too much reason to suspect this disease was of that kind, which is so fully and judiciously described by Dr. Heberden, in the second volume of the Medical Transactions; a disease which I had too often met with as it terminated

terminated for the most part fatally, and without its being in my power in one single instance to learn from dissection the seat of it, or to acquire any satisfactory information of its nature, from the most attentive recollection of the several symptoms.

It was in the evening when I saw the patient; and at that time he was free from any complaint, as he sat still. His heat was moderate; his pulse sufficiently full, but for the most part irregular; his appetite good; and the discharges as they ought to be, only rather disposed to costiveness.

He complained that his giddiness was still troublesome at times; but that a disorder, which frequently affected his breast, especially on motion, and occasioned much difficulty in breathing, gave him the greatest uneasiness.

That in walking, if he either went up the slightest acclivity, or endeavoured to walk faster than a certain pace; or if the wind was high, and met him as he walked even moderately; he was obliged to stop. He described it as a kind of stricture surrounding his chest, principally in a line with the *mammæ*, in such a manner as to render it impossible to take a step further without the hazard of immediate suffocation; a sharp, pungent pain most particularly affecting the parts under the left breast, extending itself upwards on that side, and down the inner part of the left arm, to the elbow. These symptoms, on turning from the wind, and standing still a few seconds, went off, leaving only the remembrance of

of their severity, and a caution to proceed more deliberately.

The weather seemed to have some little effect upon him; a sharp, keen air, or a high wind, or an extreme of any kind, affecting him very sensibly.

Going up stairs, and getting into bed, were great difficulties to him: nor did the stricture always cease upon lying, or rather sitting down in bed; it would sometimes continue to harrass him for an hour or two, and frequently returned about one or two o'clock in the morning, or at day-break.

He had felt occasionally a smart and sudden fit of pain in one foot, with some small swelling, apparently of the gouty kind. His age, his manner of living, his general habit, seemed to favour an opinion, that his disorder might partake of this malady. He had found too, that eructations often terminated his pains; and that nothing facilitated these discharges so much as simple pepermint-water: it was always by him in the night, and gave him ease even when a reasonable dose of a paregoric had been given without benefit.

Willing to hope that this case might partake considerably of a gouty nature, and consequently that there was some chance of relieving it, I proposed such a plan, both of diet and medicine, as might tend to enable the constitution either to discharge the gouty matter through the emunctories, or to throw it upon the extremities: I advised him to abstain from every thing heating, not however to drink much less wine than usual, and to observe caution

caution in respect to quantity of proper food. Sometimes the disorder seemed to be less severe; but no lasting advantages were gained: at length recourse was had to an anodyne at night, which was repeated either in the night, or towards morning, as the constrictive exacerbations required. Twenty-five drops of *tinct. theb.* with a like quantity of *vin. antim.* at night, and ten drops of the same tincture in a little draught early in the morning, procured for a considerable time the appearance of much benefit. This however was not lasting; upon any little exertion of muscular force, the disorder still discovered itself, and with as much violence as at first.

With a view to assist his general health, which seemed now to be much affected by the continuance of these complaints, he drank the Bath-water at Bath several weeks. Some more pain was observed in one foot whilst at Bath, and a swelling sufficient to shew it was the gout. His health was somewhat improved by the journey and the waters; but they did not alleviate the original pain in his breast, which sometimes came so suddenly and violently, towards the mornings especially, as to alarm those about him with fears of his immediate death, and which at length happened very suddenly, in the morning of the 10th of May.

The family condescended to have him opened, which was performed by my ingenious friends the Langleys, father and son, judicious surgeons in the neighbourhood; from whom I received the

the following account, not being able, through ſome prior engagements, to be preſent at the diſſection.

" On inſpecting the body of R. M. Eſq; the parts were as follows:

In the THORAX.---The *mediaſtinum* much loaded with fat; a quantity of water under the lungs, about a quart on each ſide, thin and tranſparent, nearly reſembling urine. The lungs in good condition, except on the upper part of the right ſide, there was an adheſion to the *pleura*, of about an inch, but without inflammation. The *pericardium*, on the outſide, loaded with a large quantity of ſuety fat, but more ſo on the lower ſide, next the diaphragm. The lymph in the inſide about the uſual quantity. The heart of the uſual ſize. The auricles and ventricles with all the veſſels and valves perfect; not the leaſt oſſification or appearance of diſeaſe, except on the outward muſcular part, near the *apex*, a ſmall white ſpot, as big as a ſixpence, reſembling a cicatrix.

In the ABDOMEN.---The *peritoneum* perfect.

The *omentum* much enlarged and thickened, at leaſt ſix times its natural thickneſs. The fat of a yellow appearance, and much firmer than uſual, very heavy, and the lower part adhering to the *peritoneum*.

The STOMACH.---In the inner coat a good deal of inflammation, particularly about the valve in the *pylorus*.

The LIVER;---rather more florid without than uſual; on the back convex part of it was an unuſual

uſual prominency, near the ſize of an egg; but on opening it, no appearance of diſeaſe.

The GALL-BLADDER;---full, and much diſtended, but no ſtones."

The firſt caſe apparently of this nature that occurred to me, was above twenty years ago; and the perſon is now, or lately was, living, and in good health, not having of late years, ſo far as I have heard, been attacked with this complaint. He was at that time about thirty years of age, and the youngeſt ſubject I have ever ſeen affected with this diſorder, which is ſo ſtrongly marked, as cannot eaſily be miſtaken for any other.

He was rather of a low ſtature than tall, a ſhort neck, ſtrong, temperate, and accuſtomed to regular, but not violent, exerciſe. Without any perceptible cauſe, he found himſelf ſometimes obliged to ſtop ſuddenly, if he was either walking up hill, or a little faſter than ordinary, or if he was riding a very briſk trot. Moderate motion of any kind did not affect him. Finding the diſeaſe increaſing, he applied to me for aſſiſtance. He lodged at a relation's in Cannon-ſtreet; from the end of it in Gracechurch-ſtreet to White Hart Court, where I then lived, is a very gentle aſcent; but in that ſhort ſpace he was obliged to ſtand ſtill ſeveral times, to recover from a kind of ſtricture about his cheſt, as he deſcribed it, that threatened him with death, if he had been forced to go forward. He had juſt dined, and this had added to his difficulty, having

having himself observed, that he suffered less in motion when his stomach was empty. From the description of the pain, its course, which was across the breast, and down both arms to the elbows, I could not forbear suspecting the sixth pair of nerves and their numerous connections were the seat of this disease; that some irritating cause, excited by motion, affected them; and that the parts they were principally distributed to, suffered in consequence. The lungs did not appear to be affected; no preceding cough or symptoms of inflammation, no catarrhal defluxion, no appearance of a dropsy of the thorax, nor any fugitive acrimony, that seemed capable of producing such sensations, had taken place.

I recommended a sparing diet, to keep the bowels open, to use moderate exercise on horseback; not to take long or fatiguing walks. He took some pills of soap, *pil. gummos. cinnab. nativ.* and a light chalybeate bitter for some months. After this, he went to Bath several successive seasons, and acquired his usual health.

This is the only instance that has occurred to me of a perfect recovery from this obscure, and too often fatal malady. Some have been much relieved for a considerable time, and I have heard nothing farther concerning them; but for the most part, if the disease attacks them late in life, the prognostic is unfavourable.

Perhaps it will be difficult to account for the symptoms attending this disease satisfactorily, from the appearances on dissection. In a case

not

not altogether dissimilar in that distinguishing character, the constriction which the thorax suffers upon accelerated motion; and where there was reason to suppose, from the symptoms, that most of the thoracick and abdominal viscera were in a morbid state, nothing of this kind appeared on dissection but a small ossification in one of the mitral valves of the heart, some additional quantity of moisture in the *pericardium*, some in the cavity of the *thorax*; and of the *abdomen*; but the whole surface of the body was drenched, as it were in water; a general *anasarca* covering both the trunk and limbs, with an utter inability to move without feeling a very sharp stricture about the *thorax*.

This circumstance induced me to request the gentlemen, who opened the body, to attend to the condition of the heart; with all possible accuracy; and it appears from the preceding account, that nothing preternatural was therein observed, except, on the outward muscular part near the *apex*; a small white spot as big as a sixpence, resembling a cicatrix.

Another circumstance likewise induced me to inquire more particularly after the condition of the heart, which is, that I have very seldom met with this disease, but it was attended with an irregular and intermittent pulse, not only during the exacerbations, but often when the patient was free from pain and at rest.

No doubt, as there are no two human bodies precisely alike, so there will be a great diversity

of ſymptoms; but there is one in this ſingular diſtemper, that, ſo far as I have ſeen, always marks it diſtinctly, which is, that ſharp conſtrictive pain acroſs the breaſt, which always ſupervenes a certain degree of muſcular motion, or whatever agitates the nervous ſyſtem.

For the moſt part, the patient can walk a certain pace; if he exceeds this, he is ſtopped: if he rides on horſeback, it is the ſame; he can bear the horſe to walk, or trot; but if he quickens this motion beyond a certain point, he is obliged to ſtop. This is a conſtant attendant of all the caſes I have ſeen.

If we conſider the appearances of the preſent caſe on diſſection, we may perceive there are three which are evidently preternatural:

1. The quantity of fluid in the *thorax*;

2. The unuſual quantity of fat on the *mediaſtinum*, the *pericardium*, and *omentum*; and,

3. The ſcar-like appearance on the heart. The inflammatory appearance in the ſtomach, the little protuberance on the liver, do not amount to any thing like cauſes productive of ſuch effects.

The conſequences of the increaſed quantity of a watery fluid, and fat in the breaſt, would doubtleſs be a more laborious breathing, from the lungs being confined within narrower bounds; but as theſe are permanent cauſes, the effects would be uniform.

It is very probable likewiſe, that a heavy pendulous *omentum*, ſo much increaſed by fat, would affect the action of the diaphragm very conſide-

rably, especially in an upright and decumbent posture, and would sometimes impede, sometimes accelerate the motion of the blood through the heart and lungs considerably.

This preternatural fulness of the *thorax* and appendage to the diaphragm, though they assist us in part to account for the disease, yet seem not to be the only causes of this distemper. Time and future opportunities must inform us of the rest.

However, the facts discovered on the dissection of this body, evidently suggest to us a nearer approach to reasonable indications of cure. On reviewing several of these cases which have fallen under my observation, I think they have generally attended persons who were disposed to be corpulent; it is therefore not unreasonable to suppose, that a part of their disorder has arisen from a deposition of fatty matter in some parts of the *thorax*, which, by hindering the expansion of the lungs, interrupting the natural free action of the heart, and perhaps by pressing too much on some branches of nerves, distributed to these parts for the most necessary purposes of life, if they are not the principal, yet are they among the causes of this disease. The collection of water in the *thorax*, contributes to the same end; and it is not improbable, but that in future dissections these three preternatural appearances will be found: the substance of the heart itself affected; water in the *thorax*; and an increase of fat both in the *thorax* and *abdomen*.

In attempting to cure this diſeaſe, therefore, it would ſeem not an unreaſonable plan, to endeavour to increaſe the thinner ſecretions, by the ſeveral means employed for this purpoſe, of the urine eſpecially:

And to prevent the accumulation of fat. This laſt may be a difficult taſk, and requires great circumſpection, conſidering the time of life to which this diſeaſe is moſt peculiar.

The caſe which I firſt ſaw, was in a perſon of that time of life, which would have admitted of ſuch a regimen as moſt commonly reduces the very corpulent to a competent ſize. Paſt the meridian of life, to conquer this tendency, might be both difficult and hazardous. An exact temperance in diet and in liquors, ſeems abſolutely neceſſary towards the cure of this diſeaſe, not ſo far as to weaken, but ſo as to cut off all ſuperfluity of nouriſhment, as the redundancy would moſt probably increaſe the diſtemper.

A ſtrict vegetable diet reduces exuberant fat more certainly than any other means I know. A caſe or two of this kind may not perhaps be wholly foreign to our ſubject.

A country tradeſman, aged about thirty, of a ſhort ſtature, and naturally of a freſh ſanguine complexion, and very fat, applied to me for aſſiſtance. He complained of perpetual drowſineſs and inactivity. His countenance was almoſt livid; and ſuch a degree of ſomnolency attended him, that he could ſcarce keep awake whilſt he

deſcribed

deſcribed his ſituation. In other reſpects he was well.

I adviſed him immediately to quit all animal food, to live ſolely on vegetables, and every thing prepared from them; and allowed him a glaſs of wine or a little beer occaſionally, but chiefly to confine himſelf to water. He purſued the plan very ſcrupulouſly, loſt his redundant fat, grew active as uſual in about ſix months. I recommended a perſeverance for a few months longer; then to allow himſelf light animal food once or twice a week, and gradually to fall into his uſual way of living. He grew well, and continued ſo.

A young unmarried woman, about twenty-three years of age, of a low ſtature, and very fat, applied to me for aſſiſtance in a great difficulty of breathing, ſomnolency, and incapacity for any exerciſe. It was a hardſhip to be obliged to go up ſtairs, and at laſt to croſs the floor of her apartment.

It ſeemed to me that mere obeſity was her principal malady: indeed ſhe had no other complaint but ſuch as apparently might be accounted for from this ſuppoſition. She was ordered to purſue a vegetable diet, and in the ſummer to drink the waters at Scarborough. She conformed to theſe directions, became more agile, leſs ſleepy, leſs averſe to exerciſe. She walked up the ſteps at Scarborough from the ſpaw, a taſk of no little difficulty to people much leſs encumbered. I urged a continuance of the ſame diet: ſhe was diſſuaded from it by her friends, and died of fat

in the twenty-seventh year of her age. She left permission with her sister, to be opened, if it was desired; the case was too singular to be neglected: all the *viscera* were perfectly sound, but larded with fat beyond apprehension. In dividing the external teguments, we cut through $2\frac{1}{2}$ inches of fat. She died suddenly.

Some instances of a similar nature, in which a vegetable diet has safely contributed to reduce immoderate corpulency, induces me to think that a prudent trial in the case I am treating of would be advisable. Perhaps a reasonable use of wine, not a generous one, should here be allowed, lest the strength should be diminished too much in proportion; and if the power of absorption should by this means fail, we may probably lose more ground, by the increase of the *serosa colluvies* in the cavity of the *thorax*, than what we gain by subtracting the fat.

All the means of increasing the thinner secretions, are evidently pointed out as necessary, from this dissection; and if to these we join small doses of chalybeates, or other medicines, and an abstinence from animal food, so far as the patient's health, situation, and manner of life will admit of it, we are perhaps rendering all the reasonable assistance we can, till future discoveries make us better acquainted with the real causes of this singular distemper.

FURTHER

FURTHER ACCOUNT OF THE ANGINA PECTORIS*.

SINCE my former paper on this ſubject was delivered to the Society, I have had another opportunity of being informed by diſſection of ſome circumſtances relative to this diſeaſe, which are here ſubmitted to your conſideration.

H. R. Eſq. aged 63, a gentleman rather inclined to corpulency, but active, and of a very irritable habit, middling ſtature, and freſh complexion, employed in affairs that often required attention and confinement, writing eſpecially, complained to me three or four years before his death, that he often found a difficulty, or rather an incapacity to walk up a moderate aſcent, eſpecially if he attempted to do it haſtily. I ſoon perceived that this obſcure diſeaſe, which

* From the Medical Obſervations and Inquiries, vol. v. p. 252. an. 1774.

had hitherto for the moſt part baffled all my endeavours to remove it, was taking place. I adviſed great temperance and moderation in diet, in drinking, and application; to ride frequently, paſs his ſummers in the country, to ſhun every thing that would agitate his ſpirits, or depreſs them: a gentle laxative medicine, and ſtomach bitter, to be continued for a fortnight, and occaſionally to be repeated, promoted his general health; and his own care contributed greatly to prevent the increaſe of this malady. In the ſummer of 1774, he ſpent a few weeks at Buxton, where he bathed and drank the water, and returned to town in better health than he had enjoyed ſome years before. Being much diſpoſed to flatulency, he now and then took a warm cardiac draught, which he found relieved him, and pretty often ſome aloetic pills, to prevent coſtiveneſs; but purſued no other plan of medicine, contenting himſelf with obſerving, and with ſome degree of attention, the general regulations I had preſcribed to him; and though it did not appear that much ground was hereby gained, the ſame conſtriction returning if he attempted any exerciſe beyond a certain point, which his own experience had taught him, yet he perceived no increaſe of the diſeaſe. He occaſionally conſulted me, but rather with a view to be confirmed in the plan propoſed to him, than with a hope of obtaining effectual relief, as he was very apprehenſive that he laboured under the diſeaſe which Dr. Heberden had ſo fully deſcribed.

On

On the 13th of March 1775, in the evening, in a ſudden and violent tranſport of anger, he fell down and expired immediately. His family were prevailed upon to allow the body to be opened, which was done the next day, by that very ſkilful and accurate anatomiſt, John Hunter, F. R. S. whoſe account is as follows:

The Appearances upon opening the Body of H. R. *Eſq.*

" The blood had ſettled very generally on the ſkin, appearing in dark purple ſpots.

In opening the cheſt, I found the cartilages of the ribs very much oſſified.

In the cavity of the cheſt I found a full quart of bloody ſerum.

The lungs were to all appearance ſound.

The heart to external appearance was alſo ſound; but, upon examination, I found that its ſubſtance was paler than common, more of a ligamentous conſiſtence, and in many parts of the left ventricle it was become almoſt white and hard, having juſt the appearance of a beginning oſſification.

The *valvulæ mitrales* had a vaſt number of ſuch appearances in them, and were leſs pliant than in a natural ſtate; but did not appear to be unfit for uſe.

The ſemilunar valves of the aorta were thicker than common, but very readily filled the area of the artery.

The

The aorta had ſeveral ſmall oſſifications on it, and ſeveral white parts, which are generally the beginnings of oſſifications, and which were ſimilar to thoſe found in the heart and *valves*.

The two coronary arteries, from their origin to many of their ramifications upon the heart, were become one piece of bone.

The abdominal *viſcera* appeared ſound, excepting a few ſmall ſtones in the gall-bladder.

On opening the ſkull, I found it very thick in many parts. Upon the fore-part of the falciform ligament was a conſiderable oſſification, which lay between the anterior parts of the two hemiſpheres of the brain.

The ſubſtance of the brain appeared to be very ſound.

There was rather more water in the ventricles than is common at that age; and in general, there was more water about the brain than is uſually found.

The plexus-choroides had ſeveral pretty large hydatids in them, ſome as large as a pea.

The internal carotid and baſilary artery were beginning to oſſify.

There was rather more blood about the brain than uſual; but perhaps not more than what is common to thoſe who may be ſaid to die in health.

The blood had not in the leaſt coagulated in any part of the body, nor did it coagulate upon being expoſed, which is another cauſe for the appearance of more blood than uſual, and alſo perhaps for its ſettling ſo much on the ſkin."

This

This very accurate diſſection throws much light on the nature of the diſeaſe; and though perhaps it may not aſſiſt us in curing it, yet will enable phyſicians to give ſuch aſſiſtance and advice, as may contribute much to the cure of ſuch as are afflicted with this malady, and promote the continuance of their exiſtence.

The ſtate of the parts about the heart fully ſhews, that under ſuch circumſtances it is impoſſible to bear with impunity the effects of ſudden and violent agitations, whether they ariſe from guſts of paſſion, or ſuddenly accelerated muſcular motion.

To propoſe ſuch a kind of diet as may be the moſt likely to prevent ſuch irritability; to recommend likewiſe attention to quantity; to be particularly abſtemious in reſpect to every thing heating, ſpices, ſpirits, wines, and all fermented liquors; to guard moſt ſcrupulouſly againſt paſſion, or any vehement emotions; and to make uſe of all the uſual means of eſtabliſhing and preſerving general health.

To mitigate exceſſes of irritability, by anodynes; or pains, if they quicken the circulation; to diſperſe flatulencies when they diſtend the ſtomach, by moderate doſes of carminatives, amongſt which, perhaps, ſimple peppermint-water may be one of the ſafeſt; will perhaps be the means of continuing many a valuable life to his family.

And it is not improbable, but if on the firſt appearance of this ſtricture, eſpecially in an age not

not too far advanced, the plan propoſed might greatly retard the progreſs of this diſorder, by aſſiſting to reſtrain exceſſes of paſſion and anxiety, which perhaps contribute more to the increaſe of this diſeaſe, than a combination of all the other cauſes.

OBSERVA-

OBSERVATIONS ON DISORDERS

TO WHICH

PAINTERS in WATER-COLOURS are expoſed*.

To the Medical Society.

Gentlemen,

I HAVE met with divers inſtances of perſons employed in painting with water-colours, who have been violently afflicted with that diſeaſe, which is ſo generally known by the name of *colica Pictonum*, or the dry belly-ach; and who have been ſeized with that train of ſymptoms which uſually attends this diſeaſe, and even with that ſpecies of *paralyſis* which is often the companion of the moſt violent and advanced ſtages of it.

As ſome of the firſt caſes that occurred to me happened in autumn, I attributed them to the uſual effects of the ſeaſon; a diſpoſition to bilious diſorders in every degree.

* Medical Obſervations and Inquiries, vol. v. p. 394. an. 1775.

Reflecting

Reflecting on theſe caſes, I found that ſeveral of the inſtances I had met with, who were ſo affected, both men and women, employed themſelves in painting with water-colours; and were likewiſe ſtudious, and eminent in the reſpective branches of their profeſſion.

This led me to conſider their occupation more attentively, in order to diſcover, if poſſible, the cauſe of theſe complaints, and the means of preventing or curing them with more certainty and expedition.

The pigments they make uſe of are, for the moſt part, prepared from minerals, and many of them of a poiſonous nature: white lead, red lead, vermilion, verdigriſe, orpiment, calcined ſmelts, and other ſubſtances of a deleterious kind, form the baſis of moſt of their colours.

It is not an unuſual thing, nay, it is too frequently the practice of many of theſe artiſts, whilſt they are ſtudying their ſubject, to have the point of the pencil between their lips, and whilſt they are faſhioning it to their purpoſe, are inſenſibly ſwallowing, though in a ſlow unheeded manner, the noxious particles of mineral poiſons, whoſe effects will be proportioned to the quantity thus inſenſibly taken in, and the delicacy of the conſtitution. It is ſeldom that the robuſt apply themſelves to this ſedentary occupation.

A young ingenious female artiſt, about 19 years of age, had frequent attacks of this diſeaſe. She ſtudied much, uſed very little exer-

ciſe,

ciſe, and by theſe means became more diſpoſed to ſuffer by this unheeded poiſon.

At length ſhe had a violent putrid fever, attended with the moſt ſingular appearances I ever met with; one of which was, a kind of *deſipientia* that continued for weeks after the fever left her, with total loſs of ſpeech; inſomuch that when ſhe had recovered her faculties ſo far as to know her wants, ſhe was long unable to expreſs them but by writing. To this was added a moſt exquiſite pain in the ſoles of her feet, for many weeks, which prevented all exerciſe, and thereby retarded her recovery.

At length ſhe grew better, ſat down to her favourite employment, and was frequently ſeized with a violent bilious colic, with its uſual conſequences. Emetics, purgatives, and the common proceſs in theſe caſes, removed theſe complaints; but her hands grew feeble;---ſhe became irregular, leucophlegmatic, and unable to purſue the employment ſhe was devoted to. At length, however, ſhe recovered a moderate ſhare of health, and being made ſenſible of the probable cauſe of her indiſpoſition, ſhe ſcrupulouſly avoids the practice that brought on theſe complaints, and enjoys better health.

This and ſome other inſtances that happened about the ſame time, to perſons in the ſame occupation, induced me to think theſe diſorders were principally owing to their ſwallowing, without thinking of the conſequence, ſo much of the deleterious colours, as thoſe unavoidably muſt

muſt do who accuſtom themſelves to faſhion the point of the pencil between their lips.

In conſequence of theſe reflections, I have deſired ſuch artiſts as I have been acquainted with, to find ſome other means of performing this operation; as the colours, being many of them of a poiſonous quality, would, ſooner or later, ſubject them to very grievous ſufferings, and perhaps, in time, to the total loſs of the uſe of their hands.

I do not preſume to propoſe any better method of curing this diſeaſe, than that which has been propoſed by the writers on the *colica Pictonum*. But when the vomitings are abated, copious diſcharges by ſtool procured, and the functions of all the bowels, in degree, reſtored to their uſual ſtate, I know of nothing that ſo effectually contributes to reſtore the uſe of the limbs, when impaired by theſe cauſes, as the liberal and conſtant uſe of the *tinctura guaicina volatilis*. It may be given to ſuch a quantity as may be ſufficient to keep the belly gently open, mixed with a little common ſugar or honey, and then diluted with any weaker mucilaginous liquor, as thin gruel, or barley-water, or marſh-mallow-tea.

Being fully convinced that many perſons have ſuffered, and are ſtill liable to ſuffer, from this unſuſpected cauſe, I need not ſuggeſt to you, that could theſe ingenious artiſts be, by any means, apprized of the danger they are expoſed to by ſuch practices, it might ſave them much trouble

trouble and expence, and continue them longer in a condition to ſerve themſelves, their families, and the public.

I mentioned that the patient, whoſe caſe I briefly deſcribed, ſuffered greatly from a ſevere and unremitting pain in the ſoles of her feet, after the fever had left her. I thought myſelf happy that I had directed no applications to be made to the feet, neither bliſters, warm plaſters, nor cataplaſms, though the nature of her complaints often induced me to conſider how far they might afford a proſpect of relief. I ſhould perhaps have attributed her ſufferings to theſe applications.

I almoſt ſuſpect they were the effects of ſome poiſonous quality of the paint, and eſpecially of the arſenical kind, from the following circumſtance:

When that celebrated medicine called *Plunket*'s was in uſe, about 15 or 20 years ago, for the extirpation of cancers, I met with the like pains in the feet, where that medicine had been plentifully and repeatedly applied for the extirpation of cancerous tumours; and it was generally apprehended that white arſenic was a principal ingredient in this compoſition. It is certain, however, that many of the pigments are of an arſenical origin, that others are preparations of lead and copper, all of them noxious in a high degree, and never fail to produce the worſt of conſequences, when they are received into the

human body for a long time together, even in the minuteſt quantities.

There is indeed a pain in the ſoles of the feet, which I do not recollect ever to have ſeen remarked by any writer. It is almoſt the conſtant companion of dram-drinking, and in women eſpecially. Having met with it in too many inſtances of this kind, it affords me but too juſt apprehenſions of the nature of the malady, when a conſtant burning heat in the ſoles of the feet makes a part of the patient's complaints.

It is not improbable but that many diſeaſes affecting very young children, may be aſcribed to a cauſe which I am obliged to Dr. Heberden for ſuggeſting to me. Many of their play-things are coated with paint, a great part whereof is white lead, covered with a ſlight varniſh. Children are ſeldom content with holding theſe painted poiſonous toys in their hands; they often thruſt them into their mouths, and the varniſh being eaſily worn off, moſt probably ſo much of the paint is ſwallowed as to become the ſource of complaints, which prove the more obſtinate, as the cauſe is, in general, ſo little ſuſpected.

Accidentally mentioning this ſubject to Baron Dimſdale, he informed me of a caſe that had fallen under his own notice, and of which, at my requeſt, he drew up the following deſcription:

" In November laſt I was called to a boy of about

about eight years old, ſmall of his age, but naturally lively and healthy. The account I received was, that he had for ſome time paſt been evidently declining in his health, complaining of pains in his belly and ſtomach. His apothecary had treated it as a worm caſe, and had given him a variety of evacuating medicines, particularly of the mercurial kind, without gaining any ground; on the contrary, the boy grew indolent and feeble, and had an obſtinate coſtiveneſs: on being deſired to uſe exerciſe, he complained of weakneſs and pain in his knees and ancles; his appetite, which uſed to be very keen, was almoſt gone; and his whole appearance was languid and declining; his belly was rather large and tenſe, but not to a very remarkable degree.

" Particular inquiry was made reſpecting his diet, but nothing appeared, in this reſpect, improper or unuſual.

" Conſidering it, therefore, as an obſtinate obſtruction in the bowels, a variety of medicines were tried, to keep the body moderately lax and open; but no ground was gained by theſe means; on the contrary, he declined viſibly, though ſlowly.

" Whilſt he was in this ſtate of danger and uncertainty, a relation of the family aſked me, whether he might not be injured by ſucking the pencils with which he painted. I inſtantly took the alarm, and, on enquiry, found that he had been extremely fond of colouring little pictures,

and, for that purpoſe, was furniſhed with ſhells of paint, and pencils, with which he amuſed himſelf frequently; and his friends deeming it an inoffenſive amuſement, had not mentioned it to me. On examining further, I found alſo that he had got a trick of being almoſt continually wetting his pencils in his mouth, while there was paint on them.

" On this diſcovery, all the pernicious implements were taken from him, and by giving occaſionally a purging medicine, taking care that he had ſtools regularly, and perſiſting in a proper diet, he ſoon began to mend, and in a ſhort ſpace of time recovered his uſual health and vivacity."

If your own obſervations correſpond with theſe remarks, by giving them a place in your collection, the knowledge of them will ſoon be extenſively diffuſed, and thoſe who are liable to ſuffer by theſe accidents will be apprized of their danger.

Perhaps the following account, which I received from a perſon of good underſtanding, juſt obſervation, and veracity, now living in Cornwall, may not be altogether without its uſe, and ſeems not wholly foreign to this ſubject:

A few years ago, two perſons in the ſame neighbourhood purchaſed between them a hogſhead of cyder, for the uſe of the people they employed in harveſt.

Thoſe in the ſervice of my friend had no complaints, and enjoyed their health as uſual.

His neighbour's work-people had, moſt of them, ſome degree of the *colica Pictonum*, and divers of them ſeverely.

The cyder was the ſame, and given in like quantities; the people worked in the ſame neighbourhood, and at the ſame ſeaſon.

On inquiring into the cauſe of this ſingular difference, it was found that my acquaintance had always ſent his cyder to the field in a ſmall barrel; and that his neighbour had as conſtantly made uſe of a glazed earthen pitcher for this purpoſe. The cyder was thin and ſharp; the glazing was almoſt diſſolved, and moſt probably was the cauſe of the complaints. This inſtance may ſerve as a very uſeful leſſon to many people under the like circumſtances; and to corroborate the evidence reſpecting the noxious effects of lead, already ſubmitted to the Public by Drs. Baker, Percival, and other ſenſible writers.

COFFEA *Arabica*

EXTRACTS

FROM

AN HISTORICAL ACCOUNT OF COFFEE, &c.

By JOHN ELLIS, F.R.S. &c.

I Cannot give a better explanation of the origin of the following hiſtorical account of Coffee, than in the words of Dr. Fothergill himſelf, which I ſhall extract from a letter he wrote to me *. "*Laſt Summer, before I went out of town, J. Ellis* "*deſired me to put down ſome remarks on Coffee in* "*writing, which he had repeatedly heard from me* "*in converſation. I threw out upon paper whilſt in* "*Cheſhire what occurred to me on the ſubject, in a* "*letter to himſelf. His daughter draws very pret-* "*tily, and from a performance of hers the annexed* "*plate was engraved. Dr. Solander has corrected* "*the botanical part of the deſcription: the author* "*propoſes to preface all this with an account of the* "*introduction of this liquor into Turkey and Eu-* "*rope. A paper put into my hands by Gover-* "*nor Melville, points out the time of the plant's in-* "*troduction into the Weſt Indies. The point in* "*view is, to engage the Legiſlature to lower the* "*duties, and encourage the produce and conſumption* "*of Coffee, for the mutual benefit of this nation and* "*her colonies.*"

From a work, in the compilation of which Dr. Fothergill had ſo conſiderable a ſhare, I thought it not improper to preſerve his letter, and likewiſe ſuch extracts, as might explain the general hiſtory of this dietetic and elegant vegetable, which flouriſhes luxuriantly in the hot-houſes about London. The largeſt tree which was in the Doctor's poſſeſſion, is about fifteen feet high, which is the full ſize of this exotic, as I have obſerved it in its natural ſoil: this tree is now in my Garden at Grove-hill, in full berry.

* Dated Harpur-Street, Feb. 1, 1774. Editor.

A BO-

A

BOTANICAL DESCRIPTION

OF THE

FLOWER AND FRUIT OF THE COFFEE-TREE.

THE characters of that genus of plants called COFFEA by Linnæus, who places it in the firſt order of his fifth claſs, that is, among the *Pentandria Monogynia*, or plants that have five male organs and one female organ, are as follow:

CALIX. *Perianthium* quadridentatum, minimum, germini inſidens.

The *Flower Cup*, whoſe brim has four very ſmall indentations, and is placed upon the germen or embryo ſeed veſſel.

COROLLA. *Petalum* infundibuliforme. *Tubus* cylindraceus, tenuis, calyce multoties longior. *Limbus* planus,

The *Flower* conſiſts of one funnel-ſhaped petal, with a ſlender tube nearly cylindrical, much longer than the

nus, quinquepartitus, tubo longior; *laciniis* lanceolatis, lateribus revolutis.

the flower cup. Its brim is expanded and divided into five ſegments. Theſe are longer than the tube, are ſharp-pointed, and reflexed on the ſides.

STAMINA. *Filamenta* quinque, ſubulata, tubo corollæ impoſita *Antheræ* lineares, incumbentes, longitudine filamentorum.

The *Chives* conſiſt of five awl-ſhaped filaments fixed on the tube of the flower. On theſe are placed the linear-ſhaped ſummits, containing the male duſt. Theſe are of the ſame length with the filaments.

PISTILLUM. *Germen* ſubrotundum. *Stylus* ſimplex, longitudine corollæ. *Stigmata* duo, reflexa, ſubulata craſſiuſcula.

The *Piſtil* conſiſts of a roundiſh germen, or embryo ſeed veſſel. The ſtyle is ſtraight and even, of the length of the flower, and ends in two ſlender, reflexed, ſpungy tops.

PERICARPIUM. *Bacca* ſubrotunda, puncto umbilicata.

The *Fruit* is a roundiſh berry, marked at the top with a puncture like a navel.

SEMINA. It

SEMINA. Bina, elliptico - hemiſphærica, hinc gibba, inde plana, arillo involuta.

It has two ſeeds, of an oblong hemiſpherical form, convex on the one ſide, and flat on the other; each of which is encloſed in a membrane, commonly called the parchment.

*** Linnæus has omitted taking notice of the ſeptum or membrane that divides the ſeeds into two cells or loculaments; and alſo the little furrow on the flat ſide of each ſeed.—It frequently happens, that in the Mocha Coffee only one ſeed is to be found, the other being defective.

A ſhort Deſcription of the COFFEE TREE, *taken from* Linnæus's Amœnitat. Academ. vol. VI. p. 169.

Arbor ſimplex, erecta, minus alta; *Ramis* longis, ſimplicibus, laxis & fere nutantibus, veſtitis *Foliis* oppoſitis, laurinis, ſempervirentibus, ornata *Floribus* albis ſeſſilibus, fere Jaſmini corolla, quibus *Baccæ* ceraſorum facie rubicundæ ſuccedunt, pulpâ pallidâ, ſubmuci-

The *Tree* grows erect, with a ſingle ſtem, is but low [*from eight to twelve feet high,*] has long undivided, ſlender branches, bending downwards. Theſe are furniſhed with evergreen oppoſite leaves, not unlike thoſe of the bay-tree, and adorned with white Jaſmine flowers

mucilaginoſâ, fatuâ intus gerentes ſemina duo, dura, hinc convexa, inde plana, arillo cartilagineo veſtita.

flowers ſitting on ſhort foot-ſtalks, which are ſucceeded by red berries like thoſe of the cherry, having a pale, inſipid, glutinous pulp, containing two hard ſeeds, convex on the one ſide, and flat on the other, which are covered with a cartilaginous membrane or parchment.

This Tree is a native of Arabia Felix, and of Æthiopia.

The Synonyms, *or Names given to this Tree by different Authors.*

Coffea [*Arabica,*] floribus quinquefidis diſpermis. Linn. Spec. plant. Ed. II. p. 245.

Jaſminum *Arabicum*, lauri folio, cujus ſemen apud nos Coffé dicitur. Juſſ. act. Gall. 1713, p. 388, t. 7.

Jaſminum *Arabicum*, caſtaneæ folio, flore albo odoratiſſimo. Till. Priſ. 87. t. 32.

Euonymo ſimilis Ægyptica, fructu baccis lauri ſimili. Bauh. Pin. 498. Pluk. Phyt. 272. f. 1. Bon. Alp. Ægypt. 36. t. 36.

Explana-

Explanation of the Letters in the Plate, which have a Reference to the Diſſection of the Flower and Fruit.

A. The flower, cut open to ſhew the ſituation of the five filaments, with their ſummits lying upon them.

B. Repreſents the flower cup, with its four ſmall indentations, incloſing the germen, or embryo ſeed veſſel; from the middle of which ariſes the ſtyle, terminated by the two reflexed ſpungy tops.

C. The fruit intire; marked at the top with a puncture, like a navel.

D. The fruit open, to ſhew that it conſiſts of two ſeeds, which are ſurrounded by the pulp.

E. The fruit cut horizontally, to ſhew the ſeeds as they are placed erect, with their flat ſides together.

F. One of the ſeeds taken out, with the membrane or parchment upon it.

G. The ſame, with the parchment torn open, to give a view of the ſeed.

H. The ſeed without the parchment.

THE

THE HISTORY OF COFFEE.

THE earlieſt account we have of Coffee is taken from an Arabian manuſcript in the King of France's library, N° 944, and is as follows:

Schehabeddin Ben, an Arabian author of the ninth century of the Hegira, or fifteenth of the Chriſtians, attributes to Gemaleddin, Mufti of Aden, a city of Arabia Felix, who was nearly his cotemporary, the firſt introduction into that country of drinking Coffee. He tells us, that Gemaleddin, having occaſion to travel into Perſia, during his abode there ſaw ſome of his countrymen drinking Coffee, which at that time he did not much attend to; but, on his return to Aden, finding himſelf indiſpoſed, and remembering that he had ſeen his countrymen drinking Coffee in Perſia, in hopes of receiving ſome benefit from it, he determined to try it on himſelf;

himſelf; and, after making the experiment, not only recovered his health, but perceived other uſeful qualities in that liquor; ſuch as relieving the head-ach, enlivening the ſpirits, and, without prejudice to the conſtitution, preventing drowſineſs. This laſt quality he reſolved to turn to the advantage of his profeſſion: he took it himſelf, and recommended it to the Derviſes, or religious Mahometans, to enable them to paſs the night in prayer, and other exerciſes of their religion, with greater zeal and attention. The example and authority of the Mufti gave reputation to Coffee. Soon men of letters, and perſons belonging to the law, adopted the uſe of it. Theſe were followed by the tradeſmen, and artiſans that were under a neceſſity of working in the night, and ſuch as were obliged to travel late after ſun-ſet. At length the cuſtom became general in Aden; and it was not only drank in the night by thoſe who were deſirous of being kept awake, but in the day for the ſake of its other agreeable qualities.

The Arabian author adds, that they found themſelves ſo well by drinking Coffee, that they entirely left off the uſe of an infuſion of an herb, called in their language *Cat*, which poſſibly might be Tea, though the Arabian author gives us no particular reaſon to think ſo.

Before this time Coffee was ſcarce known in Perſia, and very little uſed in Arabia, where the tree grew; but, according to Schehabeddin, it

had been drank in Æthiopia from time immemorial.

Coffee being thus received at Aden, where it has continued in use ever since without interruption, passed by degrees to many neighbouring towns, and not long after reached Mecca, where it was introduced, as at Aden, by the Dervises, and for the same purposes of religion.

The inhabitants of Mecca were at last so fond of this liquor, that, without regarding the intention of the religious, and other studious persons, they at length drank it publicly in coffee-houses, where they assembled in crowds to pass the time agreeably, making that the pretence: here they played at chess, and such other kind of games, and that even for money. In these houses they amused themselves likewise with singing, dancing, and music, contrary to the manners of the rigid Mahometans, which afterwards was the occasion of some disturbances. From hence the custom extended itself to many other towns of Arabia, and particularly to Medina, and then to Grand Cairo in Egypt; where the Dervises of the province of Yemen, who lived in a district by themselves, drank Coffee the nights they intended to spend in devotion. They kept it in a large red earthen vessel, and received it respectfully from the hand of their superior, who poured it out into cups for them himself. He was soon imitated by many devout people of Cairo, and their example followed by the studious; and afterwards by so many

many people, that Coffee became as common a drink in that great city, as at Aden, Mecca, and Medina, and other cities of Arabia.

But at length the rigid Mahometans began to diſapprove the uſe of Coffee, as occaſioning frequent diſorders, and too nearly reſembling wine in its effects; the drinking of which is contrary to the tenets of their religion. Government was therefore obliged to interfere, and at times reſtrain the uſe of it. However, it had become ſo univerſally liked, that it was found afterwards neceſſary to take off all reſtraint for the future.

Coffee continued its progreſs through Syria, and was received at Damaſcus and Aleppo without oppoſition: and in the year 1554, under the reign of the great Soliman, one hundred years after its introduction by the mufti of Aden, became known to the inhabitants of Conſtantinople; when two private perſons, whoſe names were Schems and Hekin, the one coming from Damaſcus, and the other from Aleppo, each opened a Coffee-houſe in Conſtantinople, and ſold Coffee publicly, in rooms fitted up in an elegant manner; which were preſently frequented by men of learning, and particularly poets and other perſons, who came to amuſe themſelves with a game of cheſs or draughts, or to make acquaintance, and paſs their time agreeably at a ſmall expence.

Theſe houſes and aſſemblies inſenſibly became ſo much in vogue, that they were frequented by

people of all profeſſions, and even by the officers of the ſeraglio, the pachas, and perſons of the firſt rank about the court. However, when they ſeemed to be the moſt firmly eſtabliſhed, the imans, or officers of the moſques, complained loudly of their being deſerted, while the Coffee-houſes were full of company. The derviſes and the religious orders murmured, and the preachers declaimed againſt them, aſſerting that it was a leſs ſin to go to a Tavern than to a Coffee-houſe.

After much wrangling, the devotees united their intereſts to obtain an authentic condemnation of Coffee, and determined to preſent to the mufti a petition for that purpoſe; in which they advanced, that roaſted Coffee was a kind of coal, and that what had any relation to coal was forbid by law. They deſired him to determine on this matter according to the duty of his office.

The chief of the law, without entering much into the queſtion, gave ſuch a deciſion as they wiſhed for, and pronounced that the drinking of Coffee was contrary to the law of Mahomet.

So reſpectable is the authority of the mufti, that nobody dared to find fault with his ſentence. Immediately all the Coffee-houſes were ſhut, and the officers of the police were commanded to prevent any one from drinking Coffee. However, the habit was become ſo ſtrong, and the uſe of it ſo generally agreeable, that the people continued, notwithſtanding all prohibitions, to drink it in their own houſes. The officers of

the police, ſeeing they could not ſuppreſs the uſe of it, allowed of the ſelling it on paying a tax, and of the drinking it, provided it was not done openly; ſo that it was drunk in particular places with the doors ſhut, or in the back room of ſome of the ſhopkeepers houſes.

Under colour of this, Coffee-houſes by little and little were re-eſtabliſhed; and a new mufti, leſs ſcrupulous and more enlightened than his predeceſſor, having declared publicly, that Coffee had no relation to coal, and that the infuſion of it was not contrary to the law of Mahomet, the number of Coffee-houſes became greater than before. After this declaration, the religious orders, the preachers, the lawyers, and even the mufti himſelf, drank Coffee; and their example was followed univerſally by the court and city.

The grand viziers, having poſſeſſed themſelves of a ſpecial authority over the houſes in which it was permitted to be drunk publicly, took advantage of this opportunity of raiſing a conſiderable tax on the licences they granted for that purpoſe, obliging each maſter of a Coffee-houſe to pay a ſequin per day, limiting however the price at an aſper a diſh *.

* The Turkiſh ſequin (according to Chambers) is of the value of about nine ſhillings ſterling; and the aſper is a very ſmall ſilver coin, of the value of ſomething more than an Engliſh halfpenny. The preſent value is nearly ſeven ſhillings; that is, two ſhillings and three-pence three-farthings for a dollar, or eighty aſpers; conſequently three aſpers are worth ſomething more than a penny ſterling, but they are generally reckoned at an halfpenny each. Two hundred and forty-three aſpers go to a ſequin.

Thus far the Arabian manuſcript in the King of France's library, as tranſlated by Mr. Galand; who proceeds to inform us of the occaſion of a total ſuppreſſion of public Coffee-houſes during the war in Candia, when the Ottoman affairs were in a critical ſituation.

The liberty which the politicians who frequented theſe houſes took, in ſpeaking too freely of public affairs, was carried to that length, that the Grand Vizier Kupruli, father of the two famous brothers of the ſame name, who afterwards ſucceeded him, ſuppreſſed them all, during the minority of Mahomet the Fourth, with a diſintereſtedneſs hereditary in his family, without regarding the loſs of ſo conſiderable a revenue, of which he reaped the advantage himſelf. Before he came to that determination, he viſited, incognito, the ſeveral Coffee-houſes, where he obſerved ſenſible grave perſons diſcourſing ſeriouſly of the affairs of the empire, blaming adminiſtration, and deciding with confidence on the moſt important concerns. He had before been in the taverns, where he only met with gay young fellows, moſtly ſoldiers, who were diverting themſelves with ſinging, or talking of nothing but gallantry and feats of war. Theſe he took no further notice of.

After the ſhutting up of the Coffee-houſes, no leſs Coffee was drunk, for it was carried about in large copper veſſels, with fire under them, through the great ſtreets and markets. This was only done at Conſtantinople; for in all other

other towns of the empire, and even in the ſmalleſt villages, the Coffee-houſes continued open as before.

Notwithſtanding this precaution of ſuppreſſing the public meetings at Coffee-houſes, the conſumption of Coffee increaſed; for there was no houſe or family, rich or poor, Turk or Jew, Greek or Armenian, who are very numerous in that city, where it was not drunk at leaſt twice a day, and many people drank it oftener, for it became a cuſtom in every houſe to offer it to all viſitors; and it was reckoned an incivility to refuſe it; ſo that many people drank twenty diſhes a day, and that without any inconvenience, which is ſuppoſed by this author an extraordinary advantage: and another great uſe of Coffee, according to him, is its uniting men in ſociety in ſtricter ties of amity than any other liquor; and he obſerves, that ſuch proteſtations of friendſhip as are made at ſuch times, are far more to be depended upon than when the mind is intoxicated with inebriating liquors. He computes, that as much is ſpent in private families in the article of Coffee at Conſtantinople, as in wine at Paris; and relates, that it is cuſtomary there to aſk for money to drink Coffee, as in Europe for money to drink your health in wine or beer.

Another curious particular we find mentioned here, is, that the refuſing to ſupply a wife with Coffee is reckoned among the legal cauſes of a divorce.

The Turks drink their Coffee very hot and ſtrong, and without ſugar. Now and then they put in, when it is boiling, a clove or two bruiſed, according to the quantity; or a little of the *ſemen badian*, called ſtarry anniſeed, or ſome of the leſſer cardamums, or a drop of eſſence of amber.

It is not eaſy to determine at what time, or upon what occaſion, the uſe of Coffee paſſed from Conſtantinople to the weſtern parts of Europe. It is however likely that the Venetians, upon account of the proximity of their dominions, and their great trade to the Levant, were the firſt acquainted with it; which appears from part of a letter wrote by Peter della Valle, a Venetian, in 1615, from Conſtantinople; in which he tells his friend, that, upon his return he ſhould bring with him ſome Coffee, which he believed was a thing unknown in his country.

Mr. Galand tells us he was informed by Mr. de la Croix, the king's interpreter, that Mr. Thevenot, who had travelled through the Eaſt, at his return in 1657, brought with him to Paris ſome Coffee for his own uſe, and often treated his friends with it, amongſt which number Monſieur de la Croix was one; and that from that time he had continued to drink it, being ſupplied by ſome Armenians who ſettled at Paris, and by degrees brought it into reputation in that city.

It was known ſome years ſooner at Marſeilles; for in 1644 ſome gentlemen, who accompanied Monſieur

Monſieur de la Haye to Conſtantinople, brought back with them on their return, not only ſome Coffee, but the proper veſſels and apparatus for making and drinking it, which were particularly magnificent, and very different from what are now uſed amongſt us. However, until the year 1660 Coffee was drunk only by ſuch as had been accuſtomed to it in the Levant, and their friends: but that year ſome bales were imported from Egypt, which gave a great number of perſons an opportunity of trying it, and contributed very much to bringing it into general uſe; and in 1671 certain private perſons at Marſeilles determined for the firſt time to open a Coffee-houſe in the neighbourhood of the Exchange, which ſucceeded extremely well; people met there to ſmoke, talk of buſineſs, and divert themſelves with play; it was ſoon crouded, particularly by the Turky merchants and traders to the Levant. Theſe places were found very convenient for diſcourſing on and ſettling matters relating to commerce; and ſhortly after the number of Coffee-houſes increaſed amazingly: notwithſtanding which there was not leſs drunk in private houſes, but a much greater quantity; ſo that it became univerſally in uſe at Marſeilles, and the neighbouring cities.

Before the year 1669 Coffee had not been ſeen at Paris, except at Mr. Thevenot's, and ſome of his friends; nor ſcarce heard of but from the account of travellers. That year was diſtinguiſhed by the arrival of Soliman Aga, ambaſ-

ſador from Sultan Mahomet the Fourth. This muſt be looked upon as the true period of the introduction of Coffee into Paris; for that miniſter and his retinue brought a conſiderable quantity with them, which they preſented to ſo many perſons of the court and city, that many became accuſtomed to drink it, with the addition of a little ſugar; and ſome, who had found benefit by it, did not chuſe to be without it. The ambaſſador ſtaid at Paris from July 1669 to May 1670, which was a ſufficient time to eſtabliſh the cuſtom he had introduced.

Two years afterwards, an Armenian, of the name of Paſcal, ſet up a Coffee-houſe, but meeting with little encouragement, left Paris, and came to London: he was ſucceeded by other Armenians and Perſians, but not with much ſucceſs, for want of addreſs and proper places to diſpoſe of it, genteel people not caring to be ſeen in thoſe places where it was ſold. However, not long after, when ſome Frenchmen had fitted up for the purpoſe ſpacious apartments in an elegant manner, ornamented with tapeſtry, large looking-glaſſes, pictures, and magnificent luſtres, and began to ſell Coffee, with tea, chocolate, and other refreſhments, they ſoon became frequented by people of faſhion and men of letters, ſo that in a ſhort time the number in Paris increaſed to three hundred.

For this account of the introduction of the uſe of Coffee into Paris, we are indebted to La Roque's

Roque's Voyage into Arabia Felix. We now come to trace its firſt appearance in London.

It appears from Anderſon's Chronological Hiſtory of Commerce, that the uſe of Coffee was introduced into London ſome years earlier than into Paris; for in 1652 one Mr. Edwards, a Turky merchant, brought home with him a Greek ſervant, whoſe name was Paſqua, who underſtood the roaſting and making of Coffee, till then unknown in England. This ſervant was the firſt who ſold Coffee, and kept a houſe for that purpoſe in George-yard, Lombard-ſtreet.

The firſt mention of Coffee in our ſtatute books, is anno 1660 (12 Car. II. cap. 24.) when a duty of four-pence was laid upon every gallon of Coffee made and ſold, to be paid by the maker.

The ſtatute of the 15 Car. II. cap. xi. § 15. ann. 1663, directs that all Coffee-houſes ſhould be licenſed at the general quarter ſeſſions of the peace for the county within which they are to be kept.

In 1675 King Charles iſſued a proclamation to ſhut up the Coffee-houſes, but in a few days ſuſpended the proclamation by a ſecond. They were charged with being ſeminaries of ſedition *.

The

* This proclamation was iſſued about a month after the king had dined with the corporation of London, at Guildhall, on their Lord Mayor's Day, Oct. 29, 1675. At this feaſt the king afforded the citizens abundant matter for animadverſion, in which they indulged themſelves ſo much to his diſſatisfaction, and that of his CABAL miniſtry, that a proclamation was

The firſt European author who has made any mention of Coffee is Rauwolfus, who was in the Levant in 1573; but the firſt who has particularly deſcribed it is Proſper Alpinus, in his Hiſtory of the Egyptian Plants, publiſhed at Venice in 1591, whoſe deſcription we have in Parkinſon's Theatre of Plants, p. 1622, chap. 79. as follows:

Arbor Bon, cum fructu ſuo buna, the Turk's berry drink. Alpinus, in his book of Egyptian plants, gives us the deſcription of this tree, which

was iſſued Dec. 20, for ſhutting up and ſuppreſſing all Coffee-houſes, "becauſe in ſuch houſes, and by occaſion of "the meeting of diſaffected perſons in them, divers falſe, "malicious, and ſcandalous reports were deviſed and read "abroad, to the defamation of his majeſty's government, "and to the diſturbance of the quiet and peace of the realm." The opinions of the judges were taken on this great point of ſtopping people's tongues; when they ſagely reſolved, "That "retailing of Coffee and Tea might be an innocent trade; "but as it was uſed to nouriſh ſedition, ſpread lies, and "ſcandalize great men, it might alſo be a common nui-"ſance." On a petition of the merchants and retailers of Coffee and Tea, permiſſion was granted to keep open the Coffee-houſes until the 24th of June following, under an admonition, that the maſters of them ſhould prevent all ſcandalous papers, books, and libels, from being read in them, and hinder every perſon from declaring, uttering, or divulging all manner of falſe and ſcandalous reports againſt government, or the miniſters thereof. Thus by a refinement of policy, adds Noorthouck in his Hiſtory of London, the ſimple manufacturer of a diſh of Coffee or Tea was conſtituted licenſer of books, corrector of manners, and arbiter of the truth or falſehood of political intelligence over every company he entertained! And here the matter ended. *Editor.*

he

he ſays he ſaw in the garden of a captain of the janiſſaries, which was brought out of Arabia Felix, and there planted, as a rarity never ſeen growing in thoſe places before. The tree, ſaith Alpinus, is ſomewhat like the Euonymus, or Spindle tree, but the leaves of it were thicker, harder, and greener, and always abiding on the tree. The fruit is called *Buna*, and is ſomewhat bigger than a hazel nut, and longer; round alſo, and pointed at one end; furrowed likewiſe on both ſides, yet on one ſide more conſpicuous than the other, that it might be parted into two; in each ſide whereof lieth a ſmall oblong white kernel, flat on that ſide they join together, covered with a yellowiſh ſkin, of an acid taſte, and ſomewhat bitter, and contained in a thin ſhell* of a darkiſh aſh colour. With theſe berries, in Arabia and Egypt, and other parts of the Turkiſh dominions, they generally make a decoction or drink, which is in the ſtead of wine to them, and commonly ſold in their tap-houſes or taverns, called by the name of *Caova*. Paludamus ſays *Choava*, and Rauwolfus *Chauke*. This drink has many good phyſical properties: it ſtrengthens a weak ſtomach, helping digeſtion, and the tumours and obſtructions of the liver and ſpleen, being drank faſting for ſome time together. It is held in great eſtimation among the Egyptian and Arabian women, in common feminine caſes, in which they find it does them eminent ſervice.

* This deſcription is evidently taken from a dried berry, and not from the ripe fruit.

Lord

Lord Chancellor Bacon likewiſe makes mention of it in 1624: he ſays, that the Turks have a drink called Coffee, made with boiling water, of a berry reduced into powder, which makes the water as black as ſoot, and is of a pungent and aromatic ſmell, and is drank warm.

The celebrated John Ray, in his Hiſtory of Plants, publiſhed in 1690, ſpeaking of it as a drink very much in uſe, ſays, that this tree grows only within the tropics, and ſuppoſes that the Arabs deſtroy the vegetable quality of the ſeeds, in order to confine among themſelves the great ſhare of wealth, which is brought thither from the whole world for this commodity; from whence he obſerves, that this part of Arabia might be truly ſtyled the moſt happy, and that it was almoſt incredible how many millions of buſhels were exported from thence into Turky, Barbary, and Europe. He ſays, he was aſtoniſhed that one particular nation ſhould poſſeſs ſo great a treaſure, and that within the narrow limits of one province; and that he wondered the neighbouring nations did not contrive to bring away ſome of the ſound ſeeds or living plants, in order to ſhare in the advantages of ſo lucrative a trade.

We now come to ſhew by what means this valuable tree was firſt introduced into Europe, and from thence into America.

The firſt account of this tree being brought into Europe we have from Boerhaave, in his Index of the Leyden Garden, part II. page 217, which is as follows: Nicholas Witſen, burgo-

maſter

maſter of Amſterdam, and governor of the Eaſt India Company, by his letters often adviſed and deſired Van Hoorn, governor of Batavia, to procure from Mocha, in Arabia Felix, ſome berries of the Coffee-tree, to be ſown at Batavia; which he having accordingly done, and by that means, about the year 1690, raiſed many plants from ſeeds, he ſent one over to Governor Witſen, who immediately preſented it to the garden at Amſterdam, of which he was the founder and ſupporter: it there bore fruit, which in a ſhort time produced many young plants from the ſeeds. Boerhaave then concludes, that the merit of introducing this rare tree into Europe is due to the care and liberality of Witſen alone.

In the year 1714 the magiſtrates of Amſterdam, in order to pay a particular compliment to Lewis XIV. king of France, preſented to him an elegant plant of this rare tree, carefully and judiciouſly packed up to go by water, and defended from the weather by a curious machine covered with glaſs. The plant was about five feet high, and an inch in diameter in the ſtem, and was in full foliage, with both green and ripe fruit. It was viewed in the river, with great attention and curioſity, by ſeveral members of the academy of ſciences, and was afterwards conducted to the royal garden at Marly, under the care of Monſieur de Juſſieu, the king's profeſſor of botany, who had the year before written a Memoir, printed in the Hiſtory of the Academy of Sciences of Paris in the year 1713, deſcribing the

the characters of this genus, together with an elegant figure of it, taken from a ſmaller plant, which he had received that year from Monſieur Pancras, burgomaſter of Amſterdam, and director of the botanical garden there.

In 1718 the Dutch colony at Surinam began firſt to plant Coffee; and in 1722 Monſieur de la Motte Aigron, governor of Cayenne, having buſineſs at Surinam, contrived, by an artifice, to bring away a plant from thence, which, in the year 1725, had produced many thouſands.

In 1727 the French, perceiving that this acquiſition might be of great advantage in their other colonies, conveyed to Martinico ſome of the plants; from whence it moſt probably ſpread to the neighbouring iſlands; for in the year 1732 it was cultivated in Jamaica, and an act paſſed to encourage its growth in that iſland.—Thus was laid the foundation of a moſt extenſive and beneficial trade to the European ſettlements in the Weſt Indies.

An Account of the Culture of the Coffee-Tree in Arabia Felix, extracted from La Roque's Voyage.

HE relates, that the Coffee-tree is there raiſed from ſeed, which they ſow in nurſeries, and plant them out as they have occaſion. They chuſe for their plantations a moiſt, ſhady ſituation, on ſome eminence, or at the foot of the mountains, and take great care to conduct from the mountains little rills of water, in ſmall gutters or channels, to the roots of the trees; for it is abſolutely neceſſary they ſhould be conſtantly watered, in order to produce and ripen the fruit. For that purpoſe, when they remove or tranſplant the tree, they make a trench of three feet wide, and five feet deep, which they line or cover with ſtones, that the water may the more readily ſink deep into the earth with which the trench is filled, in order to preſerve the moiſture from evaporating. When they obſerve that there is a good deal of fruit upon the tree, and that it is nearly ripe, they turn off the water from the roots, to leſſen that ſucculency in the fruit which too much moiſture would occaſion.

In places much expoſed to the ſouth they plant their Coffee-trees in regular lines, ſheltered by a kind of Poplar-tree, which extends its branches on every ſide to a great diſtance, and

and affords a very thick ſhade. Without ſuch precaution, they ſuppoſe the exceſſive heat of the ſun would parch and dry the bloſſoms ſo, that they would not be ſucceeded by any fruit.

In ſituations not ſo much expoſed to the ſun, this defence is not neceſſary. When they perceive the fruit come to maturity, they ſpread cloths under the trees, which they ſhake, and the ripe fruit drops readily*; they afterwards ſpread the berries upon mats, and expoſe them to the ſun until they are perfectly dry; after which they break the huſk with large heavy rollers, made either of wood or ſtone. When the Coffee is thus cleared of its huſk, it is again dried in the ſun; for, unleſs it is thoroughly dried, there is danger of its heating on board the ſhip. It is then winnowed with a large fan; for if it is not well cleaned and dried, it ſells for a much lower price.

* This circumſtance deſerves the particular attention of the Weſt India planter, who, I am told, is accuſtomed to gather his Coffee as ſoon as it turns red, before it changes to a dark red colour, and begins to ſhrivel; whereas the Arabians wait for thoſe tokens, which ſhew the full maturity of the fruit. Mr. Miller in his Dictionary mentions, that in ſome ſtoves in England Coffee is raiſed of a better quality than the beſt Mocha Coffee that can be procured in this country; which may likewiſe be owing to gathering the fruit only when it is thoroughly ripe.

The manner of preparing and drinking Coffee among the Arabians, from the ſame author.

The Arabians, when they take their Coffee off the fire, immediately wrap the veſſel in a wet cloth, which fines the liquor inſtantly, makes it cream at top, and occaſions a more pungent ſteam, which they take great pleaſure in ſnuffing up as the Coffee is pouring into the cups. They, like all other nations of the Eaſt, drink their Coffee without ſugar.

People of the firſt faſhion uſe nothing but Sultana Coffee, which is prepared in the following manner:—They bruiſe the outward huſk, or dried pulp, and put it into an iron or earthen pan, which is placed upon a charcoal fire; they then keep ſtirring it to and fro until it becomes a little brown, but not of ſo deep a colour as common Coffee; they then throw it into boiling water, adding at leaſt the fourth part of the inward huſks, which is then boiled all together in the manner of other Coffee: the colour of this liquor has ſome reſemblance to the beſt Engliſh beer. The huſks muſt be kept in a very dry place, and packed up very cloſe; for the leaſt humidity ſpoils the flavour. They eſteem the liquor prepared in this manner preferable to any other. The French, when they were at the court of the King of Yemen, ſaw no other Coffee drank, and they found the flavour of it very delicate and agreeable; there was no occaſion to uſe ſugar, as it had no bitter taſte to cor-

reſt. In all probability this Sultana Coffee can only be made where the tree grows; for, as the huſks have little ſubſtance, if they are too much dried, in order to ſend them to other countries, the agreeable flavour they had when freſh is greatly impaired.

It may perhaps be worth while for our Weſt India planters to make a trial of drying the outward and inner huſk of Coffee ſeparately, in the manner the Chineſe do their tea, upon a broad, ſhallow iron pan, turned upwards at the brim, placed upon a ſtove. They ſhould be kept continually turning, to prevent burning; and when they are become too hot to be handled, they ſhould be taken off with a kind of ſhovel, and laid upon a mat, on a low table, and ſhifted about until they cool, fanning them at the ſame time, to diſperſe the moiſture. The pan muſt be frequently wiped, and kept clean from any clammy matter ſticking to it, and the proceſs repeated while any moiſture is perceived. They muſt afterwards be packed cloſe in dry jars, canniſters, or cheſts lined with lead, ſuch as the tea is ſent over in. It will be proper to turn out theſe huſks, after they have lain ſome days, to examine whether they are thoroughly dry; and if the leaſt damp is felt, it will be neceſſary to dry them ſtill more, otherwiſe they will become mouldy and loſe their flavour: for it appears from the Arabian account, that they are not acquainted with a proper method of drying theſe huſks, and packing them ſo as to be

conveyed

conveyed to any conſiderable diſtance, without prejudicing this agreeable flavour.

The Chineſe are very careful not to leave their tea-leaves in heaps before they are dried, which would occaſion them to heat and ſpoil: they likewiſe gather no more at a time than they can dry in leſs than twenty-four hours, as they find, when they have been kept longer, they turn black. Theſe obſervations may poſſibly be of ſome uſe to thoſe who may be induced to attempt drying the pulp of the berry, for the purpoſe of making Sultana Coffee.

Extract of a Letter from Dr. Fothergill to J. Ellis, Eſquire, F. R. S. Agent for Dominica. Containing ſome Remarks on the Culture and Uſe of Coffee.

Sept. 2, 1773.

IT is doing a very uſeful piece of ſervice, and I believe an acceptable one to the public, to make them a little better acquainted with Coffee, which now conſtitutes ſo conſiderable a part of their entertainment, if not ſuſtenance. I am pleaſed with the engraving of this very elegant plant*; it is executed in the beſt manner of this able artiſt†, and exactly after the finiſhed drawing he received.

I have not time to collect, or relate with ſufficient accuracy, the hiſtory of this berry, ſo far as it might be traced in the Aſiatic hiſtories: it has been uſed for ages. By the account which is ſubjoined to the reflections I am going to make on this ſubſtance, it will appear, that it was introduced by the French into Martinico in the Weſt Indies no longer ago than the year 1727; that it has been ſince that time propagated in almoſt all the Weſt India iſlands, Engliſh, French,

* As Dr. Fothergill ſpeaks ſo favourably of this engraving, I have on that account procured the original plate alluded to; it exhibits the only impreſſion that has not been purpoſely executed for this edition of the Doctor's Works. *Editor.*

† J. S. Miller.

and

and Dutch; though it has not been cultivated by us with the attention it deſerves.

The greateſt part of the Coffee now made uſe of in Europe is, I believe, the produce of the Weſt Indies; at leaſt, the conſumption of Mocha Coffee amongſt us ſeems to be greatly reduced. Several years ago two ſhips were ſent out annually by the Eaſt India Company; they now only ſend one every two years for this article, if I am rightly informed; though at the ſame time it may be preſumed a much larger quantity is conſumed than at any time heretofore.

The French, and other nations, who have poſſeſſions in the Weſt Indies, ſupply us clandeſtinely with large quantities. It is true, we import a great deal of raw Coffee from our own iſlands; but the beſt is of foreign growth. The French in particular cultivate it with great attention; much likewiſe is brought from their Eaſt India ſettlements. Thoſe who are accuſtomed to drink Coffee frequently, are ſenſible of a very manifeſt difference between the Aſiatic, the French, and American Coffee. The refreſhing odour of the firſt, and its grateful taſte, much ſurpaſs the beſt Weſt India Coffee I have ever ſeen imported. There is ſomething in the ſmell, a rankneſs in the taſte, and diſguſting return, eſpecially of that from the Engliſh iſlands, which makes it very unpleaſant to thoſe who have been accuſtomed to the beſt Mocha Coffee.

The tree that was firſt carried to Martinico, was a deſcendant of one from Batavia. The

Dutch moſt probably brought the plants to their colony from Mocha, and there ſeems no doubt but it is the true Arabian Coffee which is now cultivated in the Weſt Indies: but if we reflect upon the courſe it has taken, we may perhaps ſee cauſe to apprehend that it may have degenerated conſiderably.

That part of Arabia from whence the Aſiatic Coffee is brought, is for the moſt part extremely ſandy, dry, and hot.

At Batavia the ſoil is in general rich and deep; and though, like other eaſtern climates, there is a dry ſeaſon, yet in the rainy periods the quantity of wet that falls is exceſſive. The rich luxuriant ſtate of vegetation in the iſland of Java, on which Batavia is ſituated, is a proof of this aſſertion; and one may ſafely infer, that a plant brought from a dry, ſterile, ſandy ſoil, will aſſume not only a very different appearance, but its fruit will have a very different quality, from that which is the produce of a fertile, moiſt ſoil, ſubjected to equal heat. It is not therefore improbable, but from this circumſtance the plant brought from Batavia to the royal garden in France, and its iſſue tranſported to a climate much more abounding with moiſture than that of which it was a native, may ſo far have aſſumed another nature, as not eaſily to be brought back to its original excellence.

I wiſh this circumſtance, however, only to be conſidered as a ſuggeſtion, which, though not without the appearance of probability, may not be

be ſufficiently warranted by experience: but ſhould it prove true, it may lead us to one practicable method of meliorating Coffee. Let the Coffee be planted in a ſoil as ſimilar to its natural one as poſſible. Indeed the ſhort account which is annexed to this letter confirms my apprehenſions. The drier the ſoil on which the Coffee grows, the ſmaller is its fruit, and its quality more excellent. There are ſome kinds of trees, perhaps the greateſt part, whoſe fruit, while the trees are young, is either more inſipid, or the taſte of it leſs refined, than at a more advanced age. The fruit of young walnut-trees is large, but it is watery and inſipid; as the tree grows older the nuts decreaſe in ſize, but their taſte is more agreeable. A ſimilar progreſs may be obſerved in many other ſpecies; and it is not improbable but the Coffee-tree may be another inſtance of the like properties. It is certain, that in old Coffee-trees the fruit is ſmaller; perhaps an accurate taſte would diſcover that its flavour is improved in proportion. The experiment may be recommended to thoſe who cultivate the Coffee-tree in our iſlands. But I have not time to trace all the circumſtances that have a probable tendency to leſſen the value of our own plantation Coffee.

I haſten to another point, which would ſoon put our planters upon overcoming every difficulty, and would oblige them to ſtudy the culture of the plant, the curing of the fruit, and ſending it to us in the higheſt perfection poſſible. By

what means can we make it the Weſt India planters intereſt to cultivate Coffee in ſuch a manner, as to approach in taſte and flavour as near to the Aſiatic as poſſible? Perhaps the ſhorteſt anſwer to this would be, make it their intereſt; that is, to encourage its importation.

I am well informed, by a perſon intelligent in theſe matters, that the duties and exciſe on Coffee from the plantations are as follow:

	£.	s.	d.
The duty on Coffee of the growth of the Britiſh plantations, for home conſumption, is 1l. 13s. $6\frac{3}{20}$d. per hundred weight; which is per lb. about — —	0	0	4
Exciſe on Ditto is, per lb. — —	0	1	6
Total per lb. is	0	1	10

When ſuch an exceſſive load of expences, and ſo many difficulties ariſe to the grower, importer, and of conſequence to the conſumer of Weſt India Coffee, it is no wonder that the planters give themſelves very little concern about its cultivation. At preſent there is very little difference in the produce, and conſequently in the price; the high duties are a bar to its uſe amongſt us, the Coffee is in general bad, and the price in proportion.

This diſcouragement renders them leſs ſolicitous about it: bad as it may be produced, it finds conſumers abroad, and to vend it with certainty anſwers their purpoſe better than a more attentive

attentive cultivation of a commodity clogged with ſuch duties.

Thoſe who know the taſte of Mocha Coffee, and are deſirous of uſing our Weſt Indian, ſoon quit it with diſguſt. Better Coffee than our own, the produce of the French iſles, finds its way into ſome of the out-ports clandeſtinely, is much uſed, and thought to be equal to the Turky. Taſte is perhaps more the effect of habit than is generally admitted; of this, tobacco is the ſtrongeſt and firſt inſtance that occurs to me: to a perſon unaccuſtomed to it, the fineſt is ſcarcely tolerable.

If the duties and exciſe upon Coffee were leſſened, the conſumption would be increaſed: taſte would grow more refined, the beſt would be ſought for, and the price would be in proportion. The preſent duties are almoſt prohibitory. It may be worth one's while to view the effects of theſe high duties in a political light—I mean in reſpect to this article.

For a century to come, it is perhaps more than probable, that the people of this country will, for one meal at leaſt, make uſe of either Tea, Coffee, or Chocolate; I ſpeak of the generality. Tea at preſent takes the lead; whence it comes, its hiſtory, properties, and uſes, have been ſo fully explained, that I ſhall ſay nothing here upon the ſubject*.

It is a queſtion often propoſed to phyſicians,

* See Dr. Lettſom on the Tea Plant.

Which

Which is beſt, Tea or Coffee? The ſolution of this point would perhaps be a difficult one. We neither find the Chineſe or Turks ſubjected to any ſuch diſcriminating effects, as enable the faculty to ſay, with preciſion, that one is more injurious than the other. For my own part, I leave it to the experience of individuals. To ſome people Coffee is diſagreeable; they charge it with producing nervous complaints. Tea is not without ſimilar accuſations. It ſeems as if the human frame was, however, ſo happily conſtructed, that it is leſs in the power of ſuch things to affect it than might at firſt ſight be imagined. The animal powers are apparently ſuch, as can convert almoſt oppoſite principles to its benefit, if uſed in any degree of moderation: ſome drink Coffee almoſt to exceſs, and condemn Tea as injurious; and ſo Coffee is treated in its turn. Theſe are proofs, however, how few people are capable of making proper inferences from experiment.

I think neither Coffee nor Tea afford any very material ſupport; that is, contain very little nutriment: they are rather the vehicles of nouriſhment than nutritious of themſelves: the moſt that can be expected from them in general is, that they are grateful, and very little injurious. Cuſtom has adopted them both, and it becomes us to make them as uſeful to ourſelves, and as ſubſervient to public good, as may be in our power. China, that ſupplies us with Tea, is remote; the navigation long and dangerous; the climate

climate not always favourable to our ſeamen; indeed, all long voyages are injurious, and the hotter the climate the worſe. As a nation, a commercial nation, whoſe accommodations depend on this uſeful race of people, we cannot, as friends to humanity, wiſh to promote the conſumption of thoſe articles, which are introduced at ſo great an expence of uſeful lives. Coffee from our own plantations is in this reſpect much preferable to Tea; the voyage is ſhorter, the riſque is leſs. Suppoſing then, that Tea and Coffee are alike in reſpect to real uſefulneſs; that one is not inferior to the other in reſpect to the health of the conſumers: ſuppoſe, likewiſe, that the diſadvantage with reſpect to the lives of the ſeamen were equal, which however is not the caſe, there is one material difference that ought to turn the ſcale in favour of the more general uſe of Coffee—it is raiſed by our fellow-ſubjects, and paid for with our manufactures. Tea, on the contrary, is paid for principally with money. The quantities of Britiſh goods which the Chineſe take from us is inconſiderable, when compared with the quantities we pay for in bullion.

The Chineſe take from us every article which they can turn to national benefit, and whatever enables them to improve their manufactures. Beſides raw ſilk, and a few other articles of ſome little uſe in our own manufactures, moſt other things imported from thence we can do without, eſpecially if the conſumption of our Coffee was encouraged. Were the duties and exciſe upon

Coffee,

Coffee, for inſtance, reduced to a quarter part, more than double the quantity would be conſumed; was the conſumption greater, the planters would find it their intereſt to cultivate the trees with more attention: increaſed demand would increaſe the price; and as more came to market, the beſt would ſell dearer than an inferior kind. Theſe muſt be the certain effects of increaſed demand.

There is another conſideration of ſome moment likewiſe; which is, that the cultivation of Coffee might be carried on in ſuch manner, as the leſſer planters might ſubſiſt by it, and a few ſimilar articles, cotton particularly, with little ſtock, and without much expence for negroes. No little planter can make ſugar to advantage; the expence of negroes, cattle, mills, and other requiſites of a ſugar plantation, are beyond his reach: if he has any landed property, by one means or another, he is often obliged to ſell it to his richer neighbour, and to remove to ſome other country, leſs unfavourable to contracted circumſtances. Thus the iſlands are gradually thinned of the white inhabitants; they become leſs able to quell the inſurrections of their negroes, or to oppoſe any hoſtile invaſion.

The annexed account of Coffee anticipates ſome remarks I meaned to have ſpoke to more fully, which had often occurred to me. The writer of that ſhort account has not, however, wholly exhauſted the ſubject: he very juſtly deſcribes many circumſtances which tend to make

make Weſt India Coffee of leſs value than the European; he is very right in his obſervations on the difference of quantity produced in different ſoils and ſituations; he moſt pertinently cenſures the Engliſh for want of care in ſhipping it home; the French exceed us vaſtly in this reſpect; and the greater price it fetches, is owing in a great degree to ſuperior care and management. One would hardly ſuſpect the merchants and planters could be capable of ſo much inattention as to ſhip Coffee in veſſels loaded with rum and coarſe ſugars; articles capable of communicating a taſte ſcarce to be driven off by fire; ſo penetrating are the ſteams ariſing from rum and ſugars confined in a ſhip's hold. So much Coffee ought to be collected together at one place as to load a veſſel. It is objected likewiſe, that the Coffee in the Weſt India iſlands cannot eaſily be dried in a proper manner, from the great moiſture of the air: but there are in all the iſlands high grounds, to which the Coffee might be brought and dried ſufficiently.

Another point ought not to be omitted, which is, that our plantation Coffee is made uſe of too ſoon. Perhaps one part of the excellence of Mocha Coffee ariſes from this circumſtance—The Eaſt India company ſend a ſhip once in two years: it is moſt probable a part of the loading has been kept in that hot dry country above a year; it is ſix months before it arrives in England; and it may be ſix or twelve months more before it comes into the conſumer's hands.

Thus,

Thus, between two and three years muſt inevitably intervene between its growth and conſumption.

Much of that mucilage, which moſt probably in roaſting is the baſis of its flavour, is changed by this delay; and indeed experience confirms it.

Beſides many inſtances that might be given from credible witneſſes (and eſpecially from Governor Scott's account of this ſubject hereunto annexed) the following paſſed under my own obſervation, and, as far as it reaches, may be concluſive:

I had a preſent made of ſeveral kinds of raw Coffee from the Weſt India iſlands; it being known that I wiſhed to encourage the culture of this plant, for the reaſons I have alleged. Some of this Coffee, which a year ago was ſo ill taſted as to be unfit for uſe, was laid in a very dry cloſet: this year it was again tried, and found to be greatly amended; in another it will probably be little inferior to the Aſiatic, if it amends in proportion. It is of much conſequence whether the Coffee is imported with other goods, or alone; whether it is kept in moiſt, damp warehouſes, or in dry, airy places; whether it is uſed immediately, or not till after it has been kept a conſiderable time. It would be well worth the planter's labour and expence, to keep his Coffee in the iſland from year to year, till he has got ſuch a quantity, either of his own, or bought from his neighbours, ſufficient to load a ſmall veſſel; marking the different ages. But the whole

whole of this depends entirely on government. Leſſening the duty would increaſe the conſumption, prevent ſmuggling, enable many whites to gain a comfortable ſupport, and to pay for our manufactures. As it is raiſed by our own people, imported with leſs riſque of ſeamen's health and lives, in a political light it muſt certainly deſerve the deliberate attention of the legiſlature.

Coffee made in the following manner is pleaſing to moſt people, and is much preferable to Tea, or to Coffee made in the uſual manner, for breakfaſt:—Let Coffee be made in the uſual manner, only a third part ſtronger; let as much boiling milk be added to the Coffee, before it is taken from the fire, as there is water; let it ſettle; drink it with cream, or without, as may be moſt agreeable. And were the poor and middling people enabled to procure this, it would be much more nouriſhing and beneficial than the wretched beverage they indulge themſelves with of the moſt ordinary Teas. Very little ſugar ought to be uſed with Coffee; on weak ſtomachs it is too apt to become acid, if made ſweet: and this is one reaſon why many people forbear drinking Coffee. I do not preſume to ſettle this important queſtion, Which is preferable, Tea or Coffee? This muſt be left to the experience of individuals. So far as concerns myſelf, I may be permitted to become evidence.

Though I like Tea, I found it not quite favourable to my health, from ſome circumſtances:

I tried Coffee, made in the manner above mentioned, and have drank it almoſt conſtantly many years, without receiving any inconvenience from it.

It may require a good deal of phyſical ſagacity to determine, how far the French cuſtom of drinking Coffee immediately after dinner, is right; but I think it can admit of no diſpute, whether a diſh of Coffee, or a bottle of wine, may then be leſs prejudicial to health.

I think, however, it is leſs injurious to drink Coffee immediately after dinner, than later in the evening; and at leaſt for one very obvious reaſon:

Coffee moſt certainly promotes watchfulneſs; or, in other words, it ſuſpends the inclination to ſleep. To thoſe therefore who wiſh not to be too ſubject to this inclination, Coffee is undoubtedly preferable to wine, or perhaps to any other liquor we know.

The inſtances of perſons to whom Coffee has this antiſoporific effect, are very numerous; and the inſtances are almoſt as numerous of ſuch to whom wine has the oppoſite effect.

To attribute the livelineſs of the French, after their repaſts, to this beverage, would be highly hypothetical: but I think it muſt be acknowledged, that after a full meal, perhaps of groſs animal food, even a mere diluent is much preferable to wine; which, whilſt it gives a temporary flow of animal ſpirits, rather oppoſes that neceſſary aſſimilation which nature aims at in the offices of digeſtion.

Was

Was Coffee ſubſtituted inſtead of the bottle immediately after dinner, it ſeems more than probable that many advantages would flow from it, both to the health of individuals, and general œconomy; and it ſeems not improbable, but by deferring Coffee or Tea ſo late as is uſually practiſed, we interrupt digeſtion, and add a new load of matter to that already in the ſtomach, which, after a full meal, is not a matter of indifference.

On the contrary, ever ſince I was capable of forming an opinion on ſubjects of this nature, I could not forbear thinking, that the uſe of Tea in an afternoon, at the time and in the manner it has generally been practiſed, is exceedingly prejudicial to many perſons; and if many have eſcaped without feeling any prejudicial effects, they may juſtly aſcribe it to the firmneſs of their conſtitution; I was almoſt tempted to ſay, to their good fortune. This matter, I own, is capable of much diſpute; and the more ſo, as minute diſtinctions muſt be called to the aid of both parties.

I cannot however conclude theſe remarks, without repeating the ſubſtance of what I could wiſh to inculcate; that in reſpect to real uſe, and as a part of our food, I have no evidence to induce me to think that Coffee is inferior to Tea.

That in reſpect to national œconomy, the benefit of our colonies, and the lives of the ſeamen, every circumſtance concurs to give Coffee

the preference. It is raiſed by our fellow ſubjects, paid for by our manufactures, and the produce ultimately brought to Great Britain.

That the great obſtacle to a more general uſe of Coffee is the very high duty and exciſe.

That leſſening the duty would not leſſen the revenue; ſmuggling would be diſcouraged, and an increaſed conſumption would make up the deficiency to the treaſury.

That the planters would be induced to cultivate Coffee with more care, was there a better market for it.

That, as little planters might be enabled to ſubſiſt by raiſing Coffee, &c. their numbers would increaſe, and add to the ſtrength of the ſeveral iſlands; as Europeans might endure the labour requiſite for the cultivation of Coffee.

I have ſubjoined the tranſlation of a paper communicated to me by Governor Melville, whoſe unwearied endeavours to promote the intereſt of Great Britain and her colonies deſerves every grateful acknowledgment; and likewiſe the copy of a letter I received long ſince from the late Governor Scott of Dominica: I perſuade myſelf, that evidences like theſe will have ſome weight with the public.

Should any part of theſe remarks afford my friend reaſon to think they may contribute to the benefit of the community, he is at liberty to make uſe of them in what manner he pleaſes.

J. FOTHERGILL.

Obſerva-

Obſervations on Coffee, by a learned and experienced Planter at the Grenades, communicated to Doctor Fothergill by Governor Melville.

Tranſlated from the French.

SEVERAL perſons in Europe imagine, that a much better kind of Coffee might be gathered in our iſlands than that which is uſually brought from thence. There is no doubt of this, and our inhabitants are very ſenſible of it; but the ever-powerful motive of intereſt prevents them from endeavouring to improve the produce of this plant.

They learn from experience, that a light ſoil, dry and elevated ſlopes, produce Coffee of a ſmaller berry and more delicate flavour; and that all the Coffee which grows in a low, fertile, and moiſt ſoil, is bad, the berry large and flat, and almoſt inſipid.

Experience alſo teaches them, that trees planted in theſe ſoils yield commonly from twelve to ſixteen ounces of Coffee per plant; in the other ſoils they ſcarcely furniſh more than from ſix to eight ounces; this makes an immediate difference of one half in the weight. Now in France, England, and all the European markets, the only ſtated difference in the price of the ſmall well-prepared Coffee, and that which is larger and of the worſt kind, is from fifteen to twenty per cent.

The inhabitants therefore would neceſſarily find it their advantage to plant their Coffee-trees in the richeſt ſoil; and thoſe perſons only will have the ſmall and fine Coffee, who have no other than bad grounds, and have not a ſufficient number of Negroes to manure and improve them.

The calculation is eaſily made: with an equal number of plants double the weight is produced; and by the difference of price no more is loſt than from fifteen to twenty per cent. Intereſt hath therefore prevented our inhabitants from applying themſelves to the culture of that kind of Coffee which is moſt valued in Europe. To excite a proper emulation among them, the difference of price between the various ſorts of Coffee ſhould be as conſiderable as it is between the ſeveral kinds of ſugar.

To theſe conſiderations we may add, that the trees laſt a much longer time in the fertile grounds, and that they need not be tranſplanted ſo frequently.

Some ſkilful perſons have adviſed to follow the method of the Arabs, with reſpect to the preparation of Coffee, in two particulars; firſt, never to gather it till it is perfectly ripe; ſecondly, to dry it in the ſhade, when ſeparated from the pulp.

The laſt of theſe is ſcarce poſſible; becauſe, although the air is very hot in theſe climates, it is always ſo damp, that we know from experience the Coffee could never be dried in the ſhade ſufficiently for exportation into Europe.

The

The firſt would be very uſeful, and even poſſible, if other perſons were employed in the buſineſs than Negroes, who, being lazy, ignorant, and generally ill-diſpoſed, either cannot or will not attend properly to this particular, and have no other wiſh but to finiſh their work as faſt as poſſible, either to get rid of the taſk impoſed upon them, or to avoid puniſhment: beſides, the ſeaſon for gathering the Coffee being near the winter, the rains, which are then very frequent, often make the berries fall before they are perfectly ripe.

As to the hiſtory of our Coffee, it certainly comes originally from Babel Mandel. The firſt tree that was brought to Martinico in 1727, or 1728, by Mr. Delieu, came from the gardens of his Moſt Chriſtian Majeſty, and was of the ſame ſpecies as that which is at Batavia. This tree was planted near to Port Royal, in a fertile moiſt ſoil, and almoſt level with the ſea, ſo that the ſpecies muſt neceſſarily have degenerated.

All the lower claſs of people in Martinico before this time cultivated the Cocoa; but by a contagion, as difficult to account for as the effect of it was general, all the Cocoa-trees periſhed in 1727. The inhabitants, half ruined, after having tried ſeveral ſchemes, reſolved at laſt to plant Coffee; and the French Eaſt India Company having lowered the duties, this cultivation was much encouraged.

The French are in general more cautious in the exportation of their Coffee than the Engliſh; they put it into caſks that are very dry: in the

Windward Iſlands, where the beſt Coffee is made, the veſſel is neither laden with raw ſugars, nor with rum; clayed ſugars only are exported with it, which are of little detriment to this berry; the captains take care alſo to place it between decks, or in ſome other very dry part of the ſhip. The Engliſh, on the contrary, ſtow raw ſugars and rum in almoſt every part of the veſſel: theſe do a conſiderable injury to the Coffee that lies near them.

There is another more diſtant cauſe, that few people have noticed, but which contributes greatly to the badneſs of the Coffee exported into England.

Moſt of the Engliſh ſhips are hired for the freight; the captains ſtow the goods as they receive them, and the owners are ſatisfied if the veſſel is but well filled: it is a matter of little concern to them, whether the ſeveral kinds of goods have been properly diſpoſed, or whether they have received any detriment by lying near each other. The French ſhips are generally laden for the proprietors own uſe; the captains buy the goods themſelves; and, that they may be able to give a proper account of their management, and to ſhew that they have acted with prudence and caution, they are obliged to pay great attention to the ſtowage of their veſſel, and to the preſervation of their cargoes. Hence it follows, that the Coffee which is carried to France is better than that which is brought to England.

Extract

Extract of a Letter from George Scott, Esq; late Lieutenant Governor of Dominica, to Dr. Fothergill.

SIR, Government House, Island Dominica, November 21, 1765.

MR. I———, a considerable planter of Grenada, touched at this island on his way thither; and, in the course of his intelligence, having made me acquainted with your patriotic efforts for encouraging the growth and produce of the infant colonies lately ceded to us by France; and being very desirous of throwing in my mite towards forwarding your very laudable labours, I have therefore taken the liberty of putting on board the ship Neptune, Edmund Stevenson master, under the care of Mr. Beats, of London, in a box directed for yourself, three small bags of Coffee, which you will do me the favour to accept, trifling as they are, though I have not the honour of your acquaintance, as they are only intended for whatever experiments you may think proper to make of them.

The little bag, marked N° 1, was gathered in the year 1760; that marked N° 2, in 1763; and N° 3, last year: all the growth of this island, which is looked upon to make the best Coffee in the West Indies, excepting that of the island of Mary Gallant; and on the west side of the island

of Martinique, on the mountains oppoſite the Diamond Rock; which Coffee the French always gave the preference to, though the inhabitants of this iſland prefer their own, which they always make uſe of for their breakfaſt, taking equal quantities of it and boiled milk (or, more properly ſpeaking, milk that is ſcalded) and after their dinner they commonly drink a cup of Coffee without milk; and they have in general excellent health, and a fine flow of ſpirits, for this part of the world: whereas the Engliſh ſubjects, whom it is difficult to wean from prejudices, ſtill perſiſt in the uſe of Tea; and, though they enjoy a good ſtate of health, do not appear to have half the vivacity or livelineſs with the French in the ſame iſland with us.

I am told, that in England they ſtamp a value upon Coffee in proportion to the ſmallneſs and greenneſs of the grain; here they regard neither the ſize nor colour of it for their own uſe, but eſteem it in proportion to the time it has been gathered, and for having been kept in a dry warm place, and expoſed to the air three or four times a year; and the greater number of years it is kept in this manner, the better it is, they ſay. They alſo aſcribe a great deal of its excellence to the method of preparing it for uſe: if it is over roaſted, it has a flat, bitter, and burnt taſte; and if it is not roaſted enough, though the Coffee ſhould be five or ſix years old, it will taſte as if it had been gathered this year: but if it is old and well roaſted, and immediately covered up

ſmoaking

ſmoaking hot in a bowl or cup, to prevent the fine volatile particles and flavour from going off; if then, when cold, it is ground, and made properly with boiling good water, it is looked upon to be in its higheſt perfection. The better ſort of French, in all the iſlands, make a practice of taking a cup of equal parts, Coffee and ſcalded milk, with a cruſt of bread, almoſt as ſoon as they get out of bed in a morning; and the reaſons they give for this cuſtom are, that it clears the brain, enlivens the ſenſes, cleanſes the ſtomach, throws off any rheum or fortuitous matter that may be lodged about the head, ſtomach, or lungs, from foul air or putrid vapours: and they likewiſe ſay, that it prevents, and even cures, the gravel. The Turks alſo ſet the higheſt value upon good Coffee, on account of its exhilarating qualities, and brightening the animal ſpirits. Surely then it muſt be preferable to Tea, which has quite contrary effects in moſt ſhapes whatever; and it muſt, in my humble opinion, be one of the beſt breakfaſts in the world for the honeſt brave people of the foggy iſland of Great Britain, where ſuch a multitude of melancholy accidents happen from a lowneſs of ſpirits. But what effects Coffee or Tea have upon the body or mind, you, Sir, muſt be the beſt judge, as it is your principal ſtudy and profeſſion to know the œconomy of the human frame; mine having been ever that of arms, and at preſent to preſide over this iſland; from whence I will with pleaſure ſend you annually as much Coffee, of whatever

whatever ſort you like, as you may want for your own uſe, while I remain here; being very much (though unknown)

Sir,

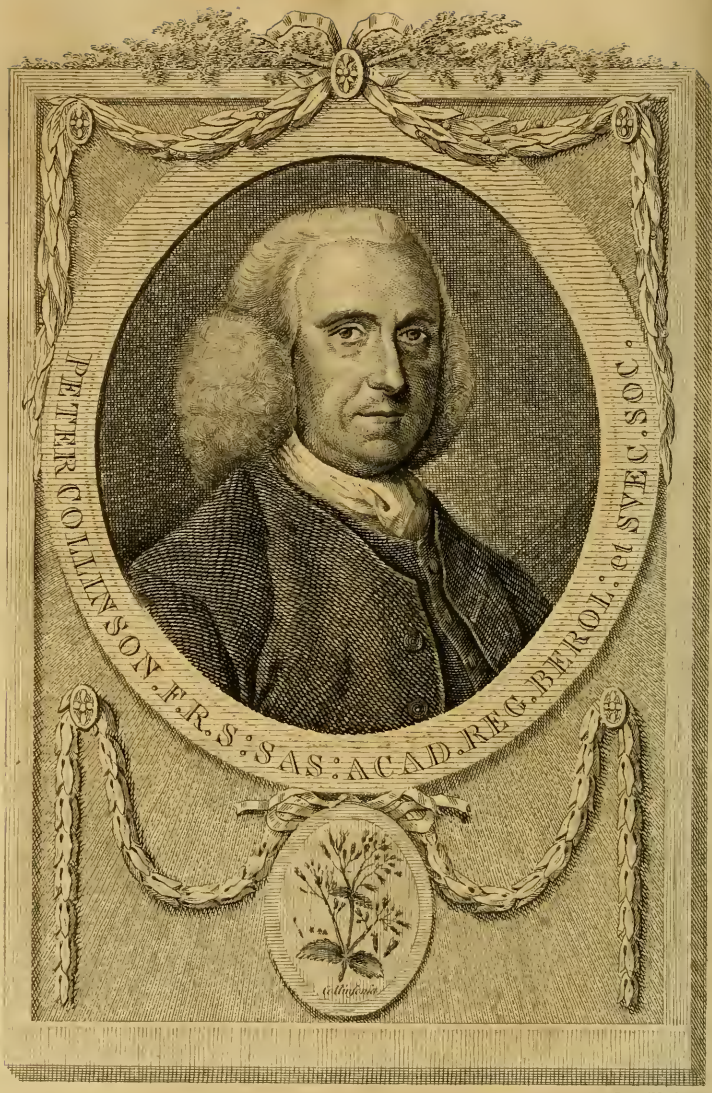
Your moſt obedient
humble ſervant,
GEORGE SCOTT.

P. S. The method of curing Coffee through the Weſt Indies is, by paſſing it through a mill after it is ripe and gathered; and after this operation it is put into ciſterns, and covered with water for ten or twelve hours, until the pulp becomes looſe, when it is waſhed, and the Coffee, being in its huſks, is thrown in heaps to ſweat, and that the water may drain off, for two or three days more, when it is ſpread abroad and dried in the ſun; and when dry, is put into troughs, and pounded with rammers, until all the huſks (or parchment, as they call it) are beat off, when it is winnowed in the air, and expoſed in the ſun until it is perfectly dry, and then carried to market. The Coffee I ſend you, in the little bag marked N° 3, is ſome of a ſmall quantity I got one of the planters to make for me after the method of Mocha; which, as I am informed, is by ſweating and drying it in the ſhade after it is paſſed through the mill, and muſt, in my opinion, be infinitely preferable to ſoaking it in water, and drying it in the ſun, which certainly muſt extract abundance of its virtues; particularly that fine flavour good Coffee has,

has, which is ſo grateful to the ſmell when it is firſt poured out. This little bag, I believe, you will find very good, though it has not been cured above ten months; and if there was enough of it to keep for three or four years, I imagine it would be perfectly excellent; for this method muſt certainly be the beſt, and I have endeavoured to perſuade many of the planters to come into it; but the great expence they muſt be at to erect buildings to cover it from the ſun and rain while it would be curing, the great labour and time it takes to cure it after the manner of Arabia, and the ſmall price it bears at preſent, will not as yet permit them to come into it; though I am fully perſuaded that the Coffee of this iſland is full as good, when pulled off the tree, as any in Arabia, was it but cured after the ſame method; which I doubt not the planters will adopt, ſhould the price of Coffee riſe, ſo as to encourage them in the undertaking.

G. S.

SOME



Engraved by Trotter

SOME ACCOUNT

OF THE LATE

PETER COLLINSON,

FELLOW OF THE ROYAL SOCIETY, AND OF THE SOCIETY OF ANTIQUARIES, IN LONDON,

AND

OF THE ROYAL SOCIETIES OF BERLIN AND UPSAL.

In a LETTER to a FRIEND*.

* Printed in the year 1769.

WHETHER thoſe who have acquired knowledge by much labour, and the exertion of great talents, are apt to ſet too high a value on their own diſcoveries; or that ſtudious men, by mixing leſs with the community at large, are leſs habituated to unreſerved converſation; it has often been lamented, that they rarely deſcend to familiar communications with ſuch as are but entering upon the ſame arduous purſuit. The late Peter Collinſon, however, afforded a pleaſing exception to this remark: his diſpoſition was naturally ſocial and chearful; and his inſtructions were conveyed in that familiar and affable manner, as both ſuited the capacity, and excited the ardour, of the ſtudent.

It was one happineſs of my life, that I was early acquainted with this eminent naturaliſt: he was then retiring from buſineſs; but as his preſence was eſſential to the intereſts of his ſucceſſor, with whom I reſided, he had apartments in the ſame houſe, which afforded me frequent acceſs to him and to his muſeum; and to him I am indebted for information on various departments of natural hiſtory, which I feel a pleaſure in acknowledging here.

Editor.

To

To * * * *.

I KNOW not, my dear friend, that I ever wiſhed for leiſure, and the talent of biography, more than at preſent: I could employ both theſe in a manner that would be pleaſing to myſelf, and perhaps at the ſame time uſeful to the public, in placing before it an example worthy of being recorded, becauſe highly worthy of imitation. The ſatisfaction ariſing from the view of a life continually employed in commendable purſuits, and in acts of laſting and extenſive utility, is not a ſmall one; we participate afreſh in every ſocial action of the friend whom we loved whilſt living, and pay that tribute to his name which love and friendſhip demand—a grateful and honourable remembrance.

The juſt eſteem which my honoured friend Peter Collinſon had acquired, not only among the chief promoters of natural hiſtory in moſt parts of the world where theſe ſtudies are cultivated, but amongſt men of underſtanding in general in every part of uſeful ſcience, will, I

perſuade myſelf, render any apology unneceſſary for attempting to exhibit ſome account of the life of this very eminent perſon.

Our acquaintance commenced about the year 1740; he was then conſidered amongſt the number of thoſe who were beſt acquainted with botany and natural hiſtory in England; his collection in moſt branches of natural hiſtory was very large, and the ſpecimens well choſen; his botanic garden contained many curious plants, not at that time to be met with in any other; and the number of ſuch kept increaſing to the laſt period of his life.

I owe much of my intimacy with the ſeveral branches of natural hiſtory, to my deceaſed friend: ſcarcely any thing gave him more pleaſure than to promote an inclination for ſuch ſtudies, ſo far as was conſiſtent with his acquaintances ſituation; for being in buſineſs himſelf, he knew the value of time too well, to endeavour to excite a taſte for ſuch reſearches, where probably it muſt have been gratified at the expence of diſcretion, and of thoſe hours which ought to have been devoted to more neceſſary employment.

The family of the Collinſons is of ancient ſtanding in the North: Peter and James were the great-grandſons of Peter Collinſon, who lived on his paternal eſtate called Hugal Hall, or Height of Hugal, near Windermere Lake, in the pariſh of Stavely, about ten miles from Kendal, in Weſtmoreland. My friend, whilſt a youth,

youth, diſcovered his attachment to natural hiſtory: inſects, and their ſeveral metamorphoſes, employed many of thoſe hours, which at his time of life are moſtly ſpent by others in very different purſuits. Plants likewiſe engaged his attention; he began early to make a collection of dried ſpecimens, and had acceſs to the beſt gardens at that time in the neighbourhood of London.

It was a favourable circumſtance to himſelf, that he was in partnerſhip with his brother James Collinſon, in a buſineſs that did not always require their preſence together. They lived in great harmony, and reciprocally afforded to each other opportunities for their reſpective purſuits. Both, however, had a ſtrong reliſh for horticulture and planting; and both had acquired a juſt conception of rural elegance.

He became early acquainted with the firſt-rate naturaliſts of that age; the Drs. Derham, Woodward, Dale, Lloyd, and, to name all in one, the great Sir Hans Sloane, were amongſt his friends. I firſt ſaw that amazing collection, now conſtituting the Britiſh Muſeum, with my deceaſed friend, in company with the late Sir Charles Wager, who had been a moſt generous and fortunate contributor to that vaſt treaſure of natural curioſities; omitting nothing, in the courſe of his many voyages, that could add to its magnificence, and encouraging the commanders under him, who were ſtationed in different parts

of the globe, to procure whatever was rare and valuable in every branch of natural hiſtory. To this he was ſtrongly excited by Peter Collinſon; for whom and his family Sir Charles had a very ſingular eſteem, and continued it to the laſt moments of his life.

Among the great variety of articles which form that ſuperb collection, ſmall was the number of thoſe with whoſe hiſtory my friend was not well acquainted; he being one of thoſe few who viſited Sir Hans at all times familiarly, and continued ſo to do to the lateſt period: their inclinations and purſuits in reſpect to natural hiſtory being the ſame, a firm friendſhip had early been eſtabliſhed between them.

Peter Collinſon was elected a Fellow of the Royal Society on the 12th of December 1728; and perhaps was one of the moſt diligent and uſeful members of that reſpectable body, not only in ſupplying them with many curious obſervations himſelf, but in promoting and preſerving a moſt extenſive correſpondence with learned and ingenious foreigners, in all countries, and on every uſeful ſubject; ſo that he not only furniſhed many inſtructive hints from his own fund of obſervations, but excited others to contribute largely to the inſtruction and entertainment of the Society.

Beſides his attention to natural hiſtory, he ſuffered nothing uſeful in either art or ſcience to eſcape him; he minuted every ſtriking hint

that

that occurred either in reading or converſation; and from this ſource he derived much information, as there were very few men of learning and ingenuity, of all profeſſions, who were not of his acquaintance at home, and moſt foreigners of eminence in natural hiſtory, or in arts and ſciences, were recommended to his notice and friendſhip.

His diligence and œconomy of time were ſuch, that though he never appeared to be in a hurry, he maintained an extenſive correſpondence with great punctuality; acquainting the learned and ingenious in diſtant parts of the globe with the diſcoveries and improvements in natural hiſtory in this country, and receiving the like information from the moſt eminent perſons in almoſt every other. Amongſt a variety of circumſtances of this kind that might be mentioned, his correſpondences with the ingenious Cadwallader Colden, Eſq; of New York, and the juſtly celebrated Dr. Franklin, of Philadelphia, furniſh inſtances of the benefit reſulting from his attention to all improvements. From the former of theſe gentlemen many valuable obſervations were received; and the latter communicated his firſt eſſays on electricity to my friend, in a ſeries of letters, which were then publiſhed, and have been reprinted in a late edition of the Doctor's ingenious diſcoveries and improvements. Their minds in this reſpect were congenial, ever intent

upon promoting public good; the letter ſubjoined is a proof of it *.

Perhaps,

* To MICHAEL COLLINSON, Eſq.

DEAR SIR, Craven-ſtreet, Feb. 8, 1770.

UNDERSTANDING that an account of our dear departed friend Mr. Peter Collinſon is intended to be given to the public, I cannot omit expreſſing my approbation of the deſign, as the characters of good men are exemplary, and often ſtimulate the well-diſpoſed to an imitation, beneficial to mankind, and honourable to themſelves. And as you may be unacquainted with the following inſtances of his zeal and uſefulneſs in promoting knowledge, which fell within my obſervation, I take the liberty of informing you, that in 1730 a Subſcription Library being ſet on foot at Philadelphia, he encouraged the deſign by making ſeveral very valuable preſents to it, and procuring others from his friends: and as the Library Company had a conſiderable ſum ariſing annually, to be laid out in books, and needed a judicious friend in London to tranſact the buſineſs for them, he voluntarily and chearfully undertook that ſervice, and executed it for more than thirty years ſucceſſively; aſſiſting in the choice of books, and taking the whole care of collecting and ſhipping them, without ever charging or accepting any conſideration for his trouble. The ſucceſs of this library (greatly owing to his kind countenance and good advice) encouraged the erecting others in different places on the ſame plan; and it is ſuppoſed there are now upwards of thirty ſubſiſting in the ſeveral colonies, which have contributed greatly to the ſpreading of uſeful knowledge in that part of the world; the books he recommended being all of that kind, and the catalogue of this firſt library being much reſpected and followed by thoſe libraries that ſucceeded.

During the ſame time he tranſmitted to the directors of the library the earlieſt accounts of every new European improvement in agriculture and the arts, and every philoſophical diſcovery: among which, in 1745, he ſent over an account of the new German experiments in electricity, together with a glaſs tube,

Perhaps, in ſome future period, the account he procured of the management of ſheep in Spain, in reſpect to their migrations from the mountains to the plains, and their ſtated returns, publiſhed in the Gentleman's Magazine for May and June 1764, may not be conſidered among the leaſt of the benefits accruing from his extenſive and inquiſitive correſpondence. When America is better peopled, the mountainous parts more habitable, the plains unloaded of their vaſt foreſts, and cultivated, the fineſt ſheep in the world may poſſibly cover the plains of Carolina, Georgia, and the Floridas in the winter months, and retreat to the mountains as the ſummer heats increaſe, and dry up the herbage. We are utter ſtrangers to this kind of œconomy. Probably it might be practiſed even in this iſland to advantage, with this difference, that the higheſt ground ſhould be choſen for the winter reſidence of theſe animals, proper ſhelter being made for them, and the wetter low lands left for ſummer.

tube, and ſome directions for uſing it, ſo as to repeat thoſe experiments. This was the firſt notice I had of that curious ſubject, which I afterwards proſecuted with ſome diligence, being encouraged by the friendly reception he gave to the letters I wrote to him upon it. Pleaſe to accept this ſmall teſtimony of mine to his memory, for which I ſhall ever have the utmoſt reſpect; and believe me, with ſincere eſteem,

Dear Sir,

Your moſt obedient
humble ſervant,

B. FRANKLIN.

Views of public benefit to this country, to others, to mankind in general, always ſuggeſted to him uſeful enquiries; and the public are in poſſeſſion of many valuable hints, which from time to time he communicated through the channel of the Gentleman's Magazine * and daily papers, ſometimes with his name, or ini-

* The following is ſaid to be a complete Liſt of P. Collinſon's papers inſerted in the Gentleman's Magazine, viz.

1. A liſt of American ſeeds imported in 1751; with ſome inſtructions for their cultivation. Gent. Mag. for Dec. 1751.

2. Some obſervations on the white pine, commonly called the Weymouth pine. Ibid. Nov. 1755.

3. Further obſervations on the Weymouth and other American pines. Ibid. Dec. 1755.

4. Obſervations on the fir-tree. Ibid. Jan. 1756.

5. Remarks on the cultivation of ſome ſpecies of North American ever-green trees. Ibid. March 1756.

6. A plan for a laſting peace with the Indians. Ibid. Sept. 1763.

7. Some anecdotes of the life of the late Dr. Stephen Hales. Ibid. 1764.

8. An account of the ſycamore or Eaſtern plane-tree. Ibid. April 1765.

9. Account of the life of the late Dr. William Stukeley. Ibid. May 1765.

10. An account of the introduction of the tea-tree of China, and of the elegantly ſpotted mennil-deer of Bengal, into England. Gent. Mag. Supplement for 1765.

11. Account of the introduction of rice and tar into our American colonies. Ibid. for June 1766.

12. Deſcription of the ancient cheſnut-tree at Tortſworth, in Glouceſterſhire. Ibid. July 1766.

13. Some obſervations on the emigration of ſwallows, &c.

tials,

tials, but oftener without any ſignature; being more ſolicitous to do good, than to be ſeen in doing it.

His converſation was chearful, and uſefully entertaining, becauſe it was generally turned to ſome intereſting diſquiſition, or imparting ſome beneficial information. This rendered his acquaintance much deſired by thoſe who had a reliſh for natural hiſtory, or were ſtudious in cultivating rural improvements, and ſecured him the intimate friendſhip of ſome of the moſt eminent perſonages in this kingdom, as diſtinguiſhed by their taſte in planting and horticulture, as by their rank and dignity. With ſome of theſe he frequently ſpent a few days at their ſeats in the neighbourhood of London, imparting many advantageous hints with regard to the improvements they were deſigning: and indeed many of them were ſenſible that very few were either ſo able to adviſe in theſe reſpects, or ſo impartial. Frequent opportunities had furniſhed extenſive obſervation and experience of the effects of different methods of cultivation; what ſoil, what aſpect, beſt ſuited different plants and trees; how beſt to cover incurable defects, how to improve beauties; and from this general knowledge, derived from repeated remarks, he often prevented young planters from committing capital miſtakes, rectified others into which they had been miſled by the ignorant and deſigning; and by ſuch means he prevailed upon many of his friends not only to embark in this rational amuſement, but

to perſevere in it, greatly to their own emolument, and the laſting advantage of their country.

A very frequent obſervation of my friend's was, that he thought it a matter of the utmoſt importance to young people of fortune, that they ſhould be as early as poſſible initiated into ſome rational purſuit, and eſpecially into a taſte for all kinds of rural improvements. The human mind, he would remark, muſt have ſome object in view; ſome amuſements are neceſſary; and if virtue and propriety do not engage it, vice and folly will. Let us then turn them to an employ, which at once contributes to their health, their pleaſure, and their profit, and ſecures them from falling into idleneſs or diſſipation, merely for want of better engagements; let us find them ſomething to do, and they cannot be unhappy, like a multitude of young perſons, who are diſſipated and corrupt, becauſe, perhaps, thoſe who have been early about them, or were concerned in their education, had not the inclination or addreſs to lead them into ſome innocent, pleaſurable, and uſeful purſuit.

Planting, he uſed to ſay, and gardening, ſupply a fund of entertainment, the moſt laſting and reaſonable of any occupation in this life; pleaſures not to be purchaſed. The trees which we ourſelves have planted, the fruits we have raiſed, the plants we have cultivated, ſeem to be like our children, a kind of new creation; their ſhade, their taſte, their fragrance, and their beauties, affect us with a richer repaſt than any

others.

others. What a pleaſing ſcene, would he obſerve, lies open to a young man of fortune devoted to ſuch amuſements! Each ſucceeding year produces new ſhades, other fruits, freſh beauties, and brings beſides moſt certain profit. To behold the riſing groves, barrenneſs made fertile, our country improved, ourſelves made uſeful and happy, and poſterity enriched! When on this favourite ſubject, a very natural reflection often eſcaped him, that he ſeldom knew a man poſſeſſed of a taſte for ſuch pleaſures, who was not at the ſame time temperate and virtuous. And indeed he had a right to make the obſervation; for he had the ſatisfaction of reckoning among his moſt intimate friends, men of the moſt amiable and unblemiſhed characters in all ſtations, parties, and diſtinctions.

Nor was he only employed in promoting this taſte amongſt his friends, in enlarging their views, correcting and refining their judgment, but alſo in furniſhing them with the means of increaſing their plantations; and it is but doing juſtice to his memory, to mention that he was the firſt who introduced the great variety of ſeeds and ſhrubs, which are now the principal ornaments of every garden; and that it was owing to his indefatigable induſtry, that ſo many perſons of the firſt diſtinction are now enabled to behold groves tranſplanted from the weſtern continent, flouriſhing ſo luxuriantly in their ſeveral domains, as if they were already become indigenous to Britain.

His

His buſineſs in the mercantile way was chiefly to North America, and the Weſt Indies; the former particularly. He had peruſed every performance that was wrote reſpecting the natural hiſtory and produce of all our own ſettlements, and indeed of all the European colonies in the New World. This enabled him to make enquiries after every thing that was curious and uſeful, and brought him acquainted with the moſt intelligent people who came over from America; his enquiries raiſed ſome curioſity in thoſe countries, and excited a taſte for natural hiſtory and botanical reſearches. It perhaps may ſafely be ſaid, that every thing of this ſort that has appeared in thoſe parts of the world, was chiefly owing to his encouragement. That eminent naturaliſt, John Bartram, may almoſt be ſaid to have been created ſuch by my friend's aſſiſtance; he firſt recommended the collecting of ſeeds, and afterwards aſſiſted in diſpoſing of them in this country, and conſtantly excited him to perſevere in inveſtigating the plants of America, which he has executed with indefatigable labour through a long courſe of years, and with amazing ſucceſs.

The quantities of new ſeeds he received from America, not only ſupplied his own garden with every thing that was curious, but furniſhed him with the means of procuring others, in exchange, from other parts of the globe. He had ſome correſpondents in almoſt every nation in Europe; ſome in Aſia, and even at Pekin; who all tranſmitted

mitted to him the moſt valuable ſeeds they could collect, in return for the treaſures of America. In this exchange of good offices, there is abundant cauſe to believe no man ever exceeded him in reſpect to punctuality, care, or generoſity; few had ever more intelligent correſpondents, or ſucceeded better in enriching this country with the vegetable produce of every other, that could either add to its advantage or ornament. And were I to aſſert, that he was the means of introducing more new and beautiful plants into Britain than any man of his time, and was inferior to none in his acquaintance with the hiſtory of their introduction, I ſhould run little hazard of tranſgreſſing the bounds of veracity.

Many anecdotes of this kind he had learned from the ancient botaniſts, who flouriſhed at his entrance into theſe ſtudies; and many obſervations he had likewiſe made in the courſe of above half a century. Were ſuch of the former of theſe, as he noted in moſt of the books of natural hiſtory which he left behind him, collected, and the many curious remarks he made on a variety of improving and entertaining ſubjects, digeſted and laid before the public, a richer treaſure of valuable knowledge can ſcarcely be offered to it, eſpecially if judicious extracts were added from the letters of his correſpondents.

The great Linnæus, at the time of his reſidence in England, contracted an intimate friendſhip with Peter Collinſon; which was reciprocally increaſed

increaſed by a multitude of good offices, and continued to the laſt without any diminution.

It was not, however, to Britain only that his benevolent views were confined: as he took much pains to excite a taſte in the Americans for natural hiſtory, ſo he likewiſe often prompted them to purſue improvements, alike beneficial to themſelves and to their mother country. How often have I heard him urge to ſuch of them as viſited him, the benefit, nay neceſſity, of cultivating flax, hemp, wine, ſilk, and other products! He would preſs the Virginians to bethink themſelves in time of a more permanent ſtaple than a plant whoſe conſumption only depends on cuſtom and caprice, and this cuſtom daily declining. Vines, ſaid he, will thrive well in your country; but imitate nature in their cultivation; do not keep them cloſe to the ground, as we are forced to do in this and other northern European climates, for the ſake of a little more ſun and heat to ripen the grape: your ſummer heats exceed, as much as ours fall ſhort; allow them, therefore, longer ſtems; let them be trained to, and ſupported by trees, and hide their fruit among the foliage, as in the warmer parts of Europe.

We frequently lamented the ſupineneſs and inattention of the coloniſts to their intereſt in this, as well as many other articles. In moſt of the northern and ſouthern colonies there are a variety of native grapes, growing wild in the woods, and twining among the trees and buſhes

for

for their ſupport; theſe yield fruit in plenty, of different kinds, and many of them capable of producing a rich good wine; how eaſy would it be in autumn to collect a ſufficient quantity of the fruit to make trial of the wine! It has been done by a very few, and with ſucceſs; the fault ſeems not ſo much in the fruit, as want of ſkill or care in making the wine. I have taſted ſome very good wine from the wild uncultivated grape, made without much ſkill, and ſent over to England; what would not the ſame fruit, with proper ſkill and management, have produced? It is certainly high time for the Americans to apply themſelves with a little more diligence to cultivate their native produce. No perſon, perhaps, was more intently ſolicitous than my friend to promote theſe uſeful eſſays, as no perſon was better acquainted with the natural produce of America; none ſaw the benefits that might reſult from them more clearly, nor could ſuggeſt more compendious and unexpenſive means of procuring them.

Beſides his attachment to natural hiſtory, he was very converſant in the antiquities of his own country; many curious remarks, as well as ſome ancient Britiſh curioſities, are in the poſſeſſion of his ſon. Few perſons were better acquainted with the progreſs of arts, ſciences, and manufactures, or improvements of any kind, amongſt us, than himſelf. The ancient ſtate, and its gradual advances to the preſent, was a frequent topic of his enquiry and converſation.

He

He was a member of the Society of Antiquarians from its firſt inſtitution, and ſupplied them often with many curious articles of intelligence and obſervation, reſpecting both our own and other countries; for wherever he was, or however ſeemingly engaged, nothing at any time eſcaped his notice, if it appeared likely to be uſeful or inſtructive. Why he was not elected one of the Curators of the Britiſh Muſeum, was matter of wonder to many of his acquaintance. He was one of the founder's moſt ancient and intimate friends, a contributor to this collection, acquainted with the ſubjects, and had done more towards promoting reſearches into natural hiſtory than perhaps moſt of his cotemporaries: but he had no greater ambition than to collect what knowledge he could, and to render this knowledge ſubſervient as much as poſſible to the good of mankind.

He lived many years in great domeſtic happineſs; his family took the ſame bias, and aided his purſuits. Like his own, it was alſo their amuſement; and being accuſtomed to the converſation of men acquainted with ſuch ſubjects, they acquired both knowledge and an attachment to the ſtudy of nature.

His perſon was rather ſhort than tall; he had a pleaſing and ſocial aſpect; of a temper open and communicative, capable of feeling for diſtreſs, and ready to relieve and ſympathize. He roſe very early, and whilſt in the country his time was almoſt continually employed in his garden,

den, obſerving and aſſiſting the operations of nature, or in the ſtudy of other parts of phyſical knowledge; which contributed to his health and his pleaſure.

He was fond of fruit to an extreme, and of flowers a perpetual admirer; he was ſeldom without them in his houſe, from the early Snow-drop to the autumn Cyclamen. He would often relate with pleaſure the aſtoniſhing advancement made in his time in horticulture; gave inſtances of many plants, which at their firſt introduction would not bear our winters without ſhelter, and now endured almoſt our hardeſt froſts; ſo that foreigners ſtood amazed at the power of vegetation in this country, and the happy temperature we enjoy, notwithſtanding the unmerited murmurs of the unthinking and injudicious againſt a climate the moſt favourable of all others to the real happineſs of mankind.

Excepting ſome attacks of the gout, in general he enjoyed perfect health and great equality of ſpirits; bearing thoſe trials which are incident to man with fortitude and reſignation.

In ſuch a courſe he arrived at his 75th year; when being on a viſit to Lord Petre in Eſſex, for whom he had a ſingular regard, he was ſeized with a total ſuppreſſion of urine, which baffling every attempt to relieve it, proved fatal on the 11th of Auguſt 1768, and deprived his family, his friends, and country, of a man devoted to their intereſt and advantage. Incloſed in his will was found a paper, importing, "that he

" hoped he ſhould leave behind him a Good " Name, which he valued more than riches; " that he had endeavoured not to live uſeleſsly; " and that, all his days, he conſtantly aimed to " be a Friend to Mankind." Such indeed he was, to the utmoſt of his ability; and he may juſtly be conſidered as a latent ſpring to many important improvements, as well as one of the principal promoters of natural hiſtory in general, and of horticulture in particular, in the age in which he lived.

He has left behind him, beſides many curious anecdotes relative to the ſtate of botany, planting, and horticulture in this country, a vaſt treaſure of dried ſpecimens of plants; and in ſpite of repeated and moſt cruel depredations made upon his garden, whereby he loſt a multitude of valuable and curious plants and ſhrubs, and had beſides very many others deſtroyed by the villains in the act of plunder, he nevertheleſs left a ſmall treaſure of rare plants in greater perfection perhaps than can be ſeen in any other ſpot.

That which I am now, though feebly, attempting to do for him, he often executed for his friends, reſcued their names from oblivion, and propoſed their virtues to be copied by ſucceeding generations. The late Dr. Stukeley was one; and many others might be mentioned, who have received from his friendly hand the tribute due to their memories.

His friendſhips were not ſuperficial; he could not ſee a worthy character drop unheeded into the

the grave without a wiſh, nay, an endeavour, to perpetuate its remembrance. For my own part, I yet feel that in him I have loſt a friend who valued my happineſs little leſs than his own, and ſincerely wiſh it was in my power to do juſtice to his memory. Till, however, ſome perſon of greater ability and more leiſure undertakes the taſk, I believe his friends will not be diſſatisfied with peruſing this account of his conduct and converſation.

Painted by Dance *Engraved by Trotter*

Engravd from the original Picture in the possession of Mr. Mawhood.

AN

ESSAY

ON THE

CHARACTER

OF THE LATE

ALEXANDER RUSSELL, M.D. F.R.S.

READ BEFORE THE

SOCIETY OF PHYSICIANS,

The 2d of October 1769.

THE following Eſſay on the Character of Dr. Ruſſell, was printed without any engraving of that diſtinguiſhed phyſician. In making the preſent collection, I did not doubt but many of his contemporaries would be highly gratified with a ſtriking likeneſs, as this is, of their late admired friend; and I can add, that no one enjoys this pleaſure more ſenſibly than myſelf, as it renews in ſome meaſure my acquaintance with a man from whom I gained much information during my medical ſtudies at St. Thomas's hoſpital, of which he then was one of the phyſicians: his behaviour and attention to the pupils endeared him to all, whilſt his liberal manner of explaining the cauſes of diſeaſes, and the effects of remedies, acquired him their reſpect. When I add, that Dr. Fothergill entertained the moſt favourable opinion of his moral rectitude and medical ſkill, a further panegyric cannot be wanted: that he loved Dr. Ruſſell with ſingular friendſhip, the following Eſſay fully demonſtrates. I was at the College of Edinburgh when this elegant eulogiſt loſt his friend; and knowing how much I was intereſted in the general loſs on which he tenderly expatiates, he concludes by informing me, "that he was ſeized with "a putrid fever, which, notwithſtanding the utmoſt "endeavours of Dr. Pitcairn and myſelf, to pre-"ſerve the life of a friend we loved, carried him "off on the ninth day, univerſally regretted."*

I have quoted this paſſage, as it gives ſome account of Dr. Ruſſell's death, which is not introduced into the ſucceeding pages.

* Letter to the Editor, dated Dec. 2, 1768.

In a letter to his amiable and learned friend Dr. Cuming, (who was a contemporary collegian with Dr. Ruſſell) the eulogiſt, whoſe merit in turn, but with unequal powers, I wiſh to commemorate, gives his motives for paying this tribute to the character of his departed friend, and ſays, that "the cordial "firm regard for the friend, the companion, and "the phyſician, did what it could to record his "worth. Let us," he adds, "preſerve the me-"mory of the deſerving: perhaps it may prompt "others likewiſe to deſerve. The human mind "requires every excitement to prompt it to look up "to its original; to think it is not made for this "world only: its exiſtence is immortal; and its "deſtiny in immortality, depends on its acting right "or wrong. Great is the prize, and worth con-"tending for; worth exciting our friends to contend "for it."*

I cannot conclude without acknowledging my obligation to Dr. Ruſſell's family for permitting the annexed engraving to be taken from the original painting in poſſeſſion of his brother-in-law, —— Mawhood, Eſq; of Knightſbridge. I am ſenſible that the thanks of the public will unite with mine, for this obliging inſtance of contributing to their pleaſure.

Editor.

* Letter to Dr. Cuming, of Dorcheſter, dated Dec. 8, 1769.

ADVERTISEMENT.

A FEW years ago it was reported, that the College of Phyſicians in London had it under conſideration to admit perſons deſirous of practiſing phyſic as Licentiates, upon an examination in Engliſh.

This was done, as it was ſuppoſed, to introduce into this rank men of little or no education, in order to depreciate the characters of many who were in ſome eſteem with the public.

An attempt of this nature could not but alarm thoſe who were immediately to be affected by it, and who felt the deſigned indignity.

Several of theſe met together, compared the accounts they had received, and found there was too much truth in the reports, to ſuffer them any longer to remain inattentive to deſigns ſo prejudicial.

It was reſolved to call the Licentiates in general together, to acquaint them with their ſituation, and to act in concert for their general ſafety.

But this was not all; thoſe who embarked in this affair, had at heart not only the honour of their profeſſion, but its public utility; not only to emancipate themſelves from an authority, which appeared to them in the light of uſurpation, but to eſtabliſh the faculty upon a ſolid and liberal foundation.

How far their endeavours may ſucceed, is uncertain; but of one thing they are ſure: they promote harmony amongſt themſelves; excite to an honourable emulation; and, whatever may be their fate, will give proofs by the rectitude of their conduct, and an exertion of their abilities, that they are not unworthy of the higheſt honours in their profeſſion.

Philanthropy is inſeparable from good minds: this led them very early to reſolve, that honourable mention ſhould be made of their colleagues after their deceaſe. It has fallen to my lot, by appointment of the Society, to perform this office. If my abilities had been equal to my friendſhip for the deceaſed, or to his deſert, the reader would have received much ſatisfaction in peruſing the following pages.

Gentlemen,

Gentlemen,

WHEN it was firſt propoſed in this aſſembly, to preſerve the memory of ſuch of our aſſociates as had deſerved well of the public, and thereby done honour to the community of which we are members, I little expected it would have fallen to my lot, ſo ſoon to have performed this mournful office for one, who in reſpect of vigour of conſtitution, temperance, and juſt management of his health, was inferior to none, ſuperior to moſt among us.

Accuſtomed as we are to ſee the ravages of that Hand, which removes the generations of men, ſtrong and weak, rich and poor, the ignorant and the wiſe, like the herbage that falls promiſcuouſly before the ſcythe, not one could refrain the unaffected ſigh, ſcarcely the tear, when it was known that our Ruſſell was no more! The tender remembrance of friendſhip yet lives in every breaſt; we mourn without form; we ſee and feel the void his fall has left, and which only time can mitigate, and a reſignation to the diſpenſations of that Power which orders all things with unerring wiſdom and goodneſs, beyond our comprehenſion.

Unpractiſed

Unpractiſed in the language of eulogy, and unequal to the charge you have committed to me, allow me to beſpeak your utmoſt candour and condeſcenſion, and think him not unworthy of your indulgence, who, in obedience to your commands, attempts to place before you, though in an imperfect manner, the idea of the companion you deplore.

We wiſh to know the moſt minute particulars in the lives of thoſe, when they are removed, who have become dear to us, either from a ſimilitude of manners, ſimilar ſtudies, a long and mutual intercourſe of friendſhip, or any other of thoſe ſtrong connections that tend to cement individuals together in ſociety. In infancy, almoſt in the period of youth and adoleſcence, many traits are often obſervable, that ſtrongly mark the future character of the man. The relation of incidents, of no conſequence in themſelves, viewed in this light, affords us ſatisfaction, when we recollect them as the early preſages of future worth: my acquaintance with our colleague having commenced at a later period, prevents any narrative of this kind. I have learned, however, that modeſty, diligence, and propriety of conduct, accompanied him from early infancy; beloved by his intimates, eſteemed by his friends, ſeldom making an enemy, never loſing a friend, by his own miſconduct.

He was early devoted to medicine by his father*; a perſon

* The conciſeneſs of the author reſpecting the character of the Doctor's father, in all probability aroſe from an apprehenſion

a perſon of great eminence as a lawyer in the city of Edinburgh, and ſingularly happy in having ſeven of his ſons that lived to be men; not one of whom, by miſbehaving, ever gave him cauſe of a moment's diſquietude; but, on the contrary, by the juſt reputation they acquired, made all good men rejoice that he had ſuch a family, and ſo eminently diſtinguiſhed by ſo many good qualities.

Our colleague, after having gone through his grammatical ſtudies with reputation in the high ſchool at Edinburgh, and ſpent two years after this in the univerſity, was placed with his uncle, who was then one of the moſt eminent practitioners in the city, in order to acquire the knowledge of the firſt rudiments of medicine. In the years 1732, 3, and 4, he continued his medical ſtudies under the profeſſors, who at that time ſo ably filled the ſeveral chairs of phyſic

henſion of endangering his own credit, or at leaſt of ſubjecting himſelf to the imputation of credulity, had he further enlarged upon it.

For how few would believe, that a moſt fond indulgent father could, in his own houſe, manage a very numerous family of children, all boys, and bring up ſeven of them to man's eſtate, without ever giving a blow, or even uſing a harſh expreſſion; and yet preſerved a more perfect obedience in them, than can be produced by any bodily pain? Such education is liberal, in the trueſt ſenſe of the word.

This worthy man, though he lived to the age of 86, was to the laſt attended, whenever he pleaſed (which was almoſt all day long) with chearful company of both ſexes, and of all ages; retained his faculties and amiable temper, was never angry, and preſerved his chearfulneſs and ſpirits to the laſt.

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in the Univerſity of Edinburgh, and laid the foundation of that character which ranks it in the public eſteem ſuperior to moſt others in Europe.

Though there had long been profeſſorſhips for medicine in that place, and ſeveral attempts had been made to introduce a general courſe of medical inſtruction, it was not till about the year 1720 that this univerſity diſtinguiſhed itſelf. Several gentlemen, who had ſtudied under Boerhaave, with a view to revive the ſtudy of medicine in their native country, where it had formerly flouriſhed, qualified themſelves for the purpoſe of giving courſes of public lectures on every branch of their profeſſion. The celebrated Monro taught anatomy, after having ſtudied it for ſeveral years under the ableſt maſters then in Europe *. The *theory* of phyſic was aſſigned to the amiable, the humane Dr. Sinclair; Drs. Rutherford and Innes choſe the *practice*; *chemiſtry* was allotted to Dr. Plummer; and the teaching the *materia medica*, together with *botany*, (of which laſt he was appointed king's profeſſor) devolved upon the learned and indefatigable Alſton. The city of Edinburgh favoured the generous deſign, added to the ſalaries allotted from the crown, and provided as ſuitable conveniencies as the place would at that time afford.

* Dr. Douglaſs, of London; Albinus, the elder, of Leyden; and Winſlow, at Paris.

They

They had no ſooner opened their reſpective profeſſorſhips, than many ſtudents of their own nation, ſome from England, from Ireland, and not long after from the Plantations likewiſe, flocked thither. This ſtimulated the profeſſors to exert their great talents with the utmoſt energy; profeſſor Monro's claſs ſoon became numerous; and the anatomy of the bones, of the nerves, and his other pieces, will long remain as teſtimonies of his great abilities, when the grateful regard of the multitude of thoſe who ſtudied under him, and were witneſſes of his ſingular attention to inſtruct and encourage his pupils, as well as to act the part of a parent to every ſtranger, fails of expreſſion. With what grace and elegance, with what minuteneſs and preciſion, would the humane, the inimitable Sinclair explain the inſtitutes of the maſter, whoſe nervous ſimplicity he ſtudied to exemplify, though not with ſervile imitation! Where he differed in opinion from that great man, with what diffidence would he offer his own! Ever the ſtudent's friend, and their example, in a noble ſimplicity of manners, and a conduct becoming the gentleman and the phyſician.

Doctor Rutherford ſtill enjoys his country's praiſe, and the laſting eſteem of all his pupils. Plummer is no more! He knew chemiſtry well. Laborious, attentive, and exact, had not a native diffidence veiled his talents as a prælector, he would have been among the foremoſt in the pupils eſteem: ſuch was the gentleneſs of his nature,

nature, ſuch his univerſal knowledge, that in any diſputed point of ſcience, the great Maclaurin always appealed to him, as to a living library; and yet ſo great his modeſty, that he ſpoke to young audiences, upon a ſubject he was perfectly maſter of, not without heſitation.

Alſton, the laborious Alſton, will live for ages. What benefit his pupils had the means of reaping, will be beſt known when his Lectures, now in the preſs, are publiſhed *. What care to ſeparate truth from falſehood! how cautious in advancing ſpeculation! how laborious in experiment, and chaſte in forming his concluſions! The numerous manuſcript copies, that were taken by his pupils, of his lectures, are ſufficient proofs of their opinion of his abilities.

But while I am thus attempting to pay my tribute of gratitude to the memories of thoſe eminent profeſſors, who laid the foundation of that ſeminary of phyſic, whoſe reputation has ſince drawn ſtudents from every nation in Europe, let me not forget the learned, the able, the laborious Innes. Though I was not ſo happy as to be of the number of his pupils, yet I can well remember the deep regret expreſſed by many of the ſtudents, my contemporaries, for his early and untimely fate. Often have I heard them tell, with what dignity, with what clearneſs and preciſion, in what a nervous maſculine ſtyle, he uſed to explain the Aphoriſms of

* Theſe Lectures are ſince publiſhed.

his

his great maſter. His colleagues, too, moſt deeply lamented the loſs which they and the public ſuſtained by the death of ſo able a co-adjutor; they regretted the Man whom they loved, the Phyſician and Profeſſor whom they eſteemed.

Under ſuch maſters, and at a time when they were daily riſing into reputation, Dr. Ruſſell ſtudied, embracing every means of qualifying himſelf for the duties of his ſtation.

Several ſtudents at that time, the foremoſt in application and in knowledge, fired by the example of their maſters, who had nothing more at heart than the improvement of thoſe who committed themſelves to their tuition, formed a ſociety for their mutual inſtruction and advancement in their ſtudies. Every ſtudent of a certain ſtanding, who diſtinguiſhed himſelf by his diligence, capacity, and conduct, was initiated into this little aſſembly. Here the opinions of the ancients, of their contemporaries, nay the doctrines of their maſters, were frequently diſcuſſed; and two of the members were always charged with the taſk of providing inſtruction and entertainment for the next meeting of the ſociety. Queſtions, no doubt, were here diſputed and decided, which long experience would have declined: but it exerciſed their faculties, gave them both ſides of arguments, taught them to doubt, and habituated them to obſervation.

Our colleague was one of the firſt members of this aſſociation, inſtituted in the autumn of

the year 1734, together with the eminent Dr. Cuming of Dorcheſter, the ſagacious Cleghorn, lecturer in anatomy at Dublin, with a few others, who, though now removed, did honour in their ſtations to this inſtitution, which not only ſubſiſts, but has yearly increaſed in vigour, and is honoured with the immediate patronage of the profeſſors. In a Theſis, not long ſince dedicated to this ſociety by a very ingenious member *, as well

* Dr. Morgan, of Philadelphia, dedicates his Theſis, publiſhed when he took his degree in the year 1763,

" Societati Medicinæ Studioſorum in Academia Edin-
" burgena dudum inſtitutæ :"

In which he beſtows, among others, the following panegyric: " Quippe qui recolam quanto cum judicio, ordine
" et decore res veſtræ gerantur ; quanta ſint in veſtris ratio-
" ciniis et ſententiis, tum libertas et candor, tum etiam nam
" expertus refero, æquus et humanus favor, ita ut ſaluber-
" rimo hoc veſtro inſtituto, quo non niſi utiliſſimæ quæſtio-
" nes diſcutiuntur, omnia conſpirant ad ſcientiæ medicæ
" ſtudium cum fructu et emolumento promovendum," &c.

In Dr. Garland's Inaugural Diſſertation, " De Medica-
" mentis adſtringentibus," publiſhed alſo in 1763, is the following account of it :

" Nec juvenum coetûs qui medicinæ ratione excolendæ
" cauſâ, ſeptimo quoque die, inter ſe in noſocomio regio con-
" veniunt, ac quorum ego in numero per triennii ſpatium
" fui, deceſſurus, non mentionem non facere potui.—Cele-
" berrimis academiæ ſcholis, hæc quaſi alia ſuccedit.—Is
" certe locus eſt, ubi audita a doctoribus, e libris petita,
" undecunque accepta ad medicinam pertinens diſciplina,
" in medium prolata, ac ultro, citroque in contrarias partes
" diſputando agitata, altius in omnium animos influit : ubi
" juventutis ſtudia gloria incenduntur, exercitatione acuun-
" tur, animique ad multiplicis ac ſpinoſæ ſcientiæ quærendæ
" laborem perferendum, propoſitis ex ſuorum numero exem-
" plis

well as from the teſtimony of another gentleman, who had been admitted into it, the ſingular advantages that reſult from this aſſociation are deſcribed in a manner that delineates the character of the ſtudents in that univerſity, and does honour to the firſt founders of the inſtitution.

Having finiſhed his ſtudies in the univerſity, though without applying for a degree at that time, he came to this city in the year 1735, and ſoon after went to Turky, and ſettled about the year 1740 at Aleppo, in the practice of phyſic.

The Engliſh factory at that place, has frequently been conſtituted of men of property and extenſive knowledge; they were ſuch when Dr. Ruſſell fixed there, at the unanimous requeſt of the gentlemen of the factory. We have no account of any of his predeceſſors being remarkably eminent in the practice of phyſic; to take care of the factory, ſeems to have been the extent of their views.

Dr. Ruſſell applied himſelf aſſiduouſly to gain a knowledge of the language of the country, and to become acquainted with the ableſt of the numerous practitioners in the place, who were employed among the inhabitants. He ſucceeded in both:

" plis pulcherrimis, perpelluntur, poſtremo, ubi omnes in-
" ter ſe mutuæ amicitiæ firmiſſimum nectit vinculum. Flo-
" ruit triginta prope annos his juvenilis circulus, et ut æter-
" num floreat precor!"

Soon after its firſt inſtitution, the writer of this Memorial was likewiſe a member, and knows from experience the benefits reſulting from it.

he ſoon diſcovered the incapacity of theſe; a few traditional receipts compoſed the whole furniture of moſt of them; he found a few, however, capable of information, and aſſiſted them to the utmoſt of his power.

He was ſoon applied to by the inhabitants of Aleppo, of all ranks and profeſſions; Franks, Greeks, Armenians, Maronites, Jews, &c. and even by the Turks themſelves: in this inſtance they forgot that he was an unbeliever, remitted of their uſual contempt for ſtrangers, and not only beheld him with reſpect, but courted his friendſhip, and placed unlimited confidence in his opinion. The paſcha himſelf became acquainted with the merit of our deceaſed colleague, conſulted him, called him his friend, found him upright, ſenſible, and ſincere; as a man, polite without flattery, decent, but not ſervile; as a chriſtian, true to his principles; diſintereſted and generous as a Briton; and in point of ſkill as a phyſician, ſuperior to every one. A natural, even, cool and conſiſtent temper; a freedom of behaviour as remote from confidence as conſtraint, improved by reading and converſation; a mind imbued with juſt reverence to God, and impreſſed with a ſenſe of the duty we owe; an underſtanding fraught with the principles of the profeſſion to which he had been early devoted (the practice of phyſic) happily blended with great benevolence; was a character ſeldom to be met with in the Aſiatic regions: this, however, was the character of our colleague; and

and I appeal to you, my aſſociates, for the juſtice of the portrait.

The factory thought themſelves happy in ſuch a phyſician, ſuch a companion, ſuch a countryman. His cloſe and intimate connection with the paſcha enabled him to render to the factory the moſt important ſervices; and indeed all the European nations, trading at that place, were repeatedly obliged to his interpoſition, on a multitude of occaſions.

Seldom would the paſcha determine any intricate affair, reſpecting not only commerce, but even the interior police of his government, without firſt conſulting his phyſician and his friend; and as ſeldom deviated from the opinion he propoſed: and ſuch was the paſcha's reſpect for ſo rare a character, and ſuch his friendſhip and determined reſolution to do him honour, that he even choſe to oblige the people in the Doctor's preſence, and ſeldom puniſhed any criminal but in the Doctor's abſence; that the people might learn to think it was owing to the Doctor's interpoſition, that examples of ſeverity were not more frequently inflicted *.

Many

* With regard to criminals, this behaviour of the paſcha was very remarkable and polite; for, when mitigating circumſtances occurred in favour of criminals, to induce the paſcha to ſpare them, he often diſmiſſed them, with a caution to behave better in time to come; for they were ſo bad, that none of their own countrymen durſt ſpeak to them; but that they owed their lives to the Engliſh Doctor: though he ſometimes before had retired, to make way for the neceſſary ſeve-

Many princely preſents were the conſequence of this eſteem: the paſcha did not even forget the Doctor's father, *to whom*, ſaid he, *I am obliged for your aſſiſtance.* He ordered preſents to be ſent to the worthy old man: what joy muſt this excite in an aged parent's heart, to have ſuch authentic proofs of the merit of his ſon from ſo diſtant a clime, and where the merit muſt be great to gain ſuch a teſtimony!—I leave the Hiſtory of Aleppo to ſpeak its author's abilities.—It has been already tranſlated into other

rities of juſtice, and knew nothing of the matter till the poor unhappy wretches came to his houſe, to fling themſelves at his feet, and with true gratitude thank him for their lives: and indeed ſometimes the paſcha went ſo far as to tell the criminals, that, in his opinion, they certainly deſerved Death, but that he durſt not order it, for the Engliſh Doctor inſiſted on Mercy. It is rare to find any ruler making ſo great a ſacrifice of his popularity to a ſtranger, or in ſo polite a manner to transfer it to any body.—Beſides this paſcha, who ruled a long time, the others that came after him had the greateſt confidence in the Doctor, and intimacy with him; particularly one paſcha of this place, an old man, who had ruled the empire as grand vizier, and died at Aleppo, intruſted him with the whole ſecrets of his family, and depended on his advice.

The Doctor's fame was perhaps more general over the Turkiſh empire, than any phyſician's is in Europe; well known at court, and in every province, he eſcaped more than once the diſagreeable circumſtance of being ſent for to the Grand Seignior in time of the plague. His brother was, in moſt of the trading towns in Turky, found out, by bearing the ſame name, and offered great civilities; and once at Conſtantinople, when a ſlight plague happened there, was oppreſſed with invitations to viſit ſeveral great men, which with difficulty he avoided. W. R.

languages,

languages, and it will be juſtly eſteemed one of the moſt important productions in medicine, ſhould ever that fatal ſcourge, the plague, be permitted to come amongſt us.

You, gentlemen, are not ignorant of its worth; and to ſay more on this ſubject, would be detracting as much from your underſtandings, as from your friendſhip.

Suffer me, however, to recount one circumſtance, which may not perhaps be of ſuch general notoriety:

From his thorough knowledge of the peſtilence, and the means ſucceſsfully made uſe of to prevent infection, in the countries moſt expoſed to this fatal diſeaſe, he formed a deſign of exciting the greateſt commercial nation in the world to provide ſome more effectual means than hitherto it had done, in order to prevent it from again becoming the dreadful theatre of peſtilential contagion.—With this view, in his return from Turky, he viſited the moſt famous lazarettos, to which he could have acceſs, inquired into their ſtructure, the government they were under, and took an account of all the precautions they uſed for preſervation.

At Naples, Leghorn, and other places, he had all the opportunities of obſervation he could wiſh for; and profited by them to ſuch a degree, as to be better acquainted with the conduct of the wiſeſt ſtates, in reſpect to the means of prevention, than perhaps any other perſon: indeed, his acquaintance with this ſubject, and his ex-

perience, induced him to make himſelf maſter of every thing appertaining to preſervation from one of the greateſt of all human calamities.

And ſo generally was his great knowledge of this diſtemper eſtabliſhed, that in the latter end of the year 1757, when our miniſtry was alarmed with the report of its being broke out at Liſbon, and earneſtly ſolicitous to take every precaution to prevent its being imported into this kingdom, they thought no perſon ſo fit to be conſulted on the means proper to be purſued, as our worthy colleague. Doctor Ruſſell received his orders to attend the Privy Council; he came, and gave ſuch pertinent and ſatisfactory anſwers to the queſtions propoſed, that he was deſired to communicate his information, and the method he propoſed to prevent the ſpreading of that calamity, in writing. This he accordingly did; and ſhould it pleaſe the Almighty hereafter to threaten this nation with that dreadful ſcourge, the proſecution of the plans then ſuggeſted may perhaps greatly contribute to avert from us the moſt terrible of all diſeaſes.

From the time he left England, to his return in February 1755, we had maintained a regular correſpondence. I could not forbear mentioning to him repeatedly, how acceptable a more accurate account of Aleppo would be to this nation, and to all Europe; that no perſon would probably ever ſtand a chance of ſucceeding in it ſo happily as himſelf; that his long reſidence there, his knowledge of the language,

guage, the manners, cuſtoms, diſeaſes of the place, the great credit he had acquired amongſt all ranks, by an able, diligent, and diſintereſted exertion of his faculties amongſt them, his influence over the paſcha, and the reſpect paid him by the Turks themſelves, would facilitate every enquiry. He viewed the propoſal in the ſame light, collected materials, made ſuitable enquiries, and has erected a laſting and honourable monument to his memory.

With no ſmall trouble he ſucceeded in procuring us the ſeeds of the *true ſcammony*. They were raiſed by my two botanical friends, the late Peter Collinſon, and the indefatigable James Gordon. Seeds were likewiſe ſent over to the ſouthern colonies of America, in hopes that in a ſimilar ſoil and latitude, in ſome future time, we might from thence have this valuable drug unadulterated *.

To

* The late Conſul Sherrard, who reſided long at Aleppo, and was one of the moſt eminent botaniſts of his time, endeavoured long and fruitleſsly to obtain the ſeeds of this and ſome other curious plants. The Arabs, who are the people chiefly employed in theſe affairs, not ſo much through ignorance as knaviſhneſs, will bring every kind of ſeed but the right, and aſſert that it is the ſeed required. Dr. Ruſſell aſſured me, that he had near twenty different ſeeds brought to him for the ſeeds of the true Scammony, by different perſons employed to procure it him, with promiſes of a ſuitable reward. Amongſt theſe found, there were two parcels of ſeeds alike, which correſponding to the general character, he judged were the right; and theſe he ſent over to England. Many plants were raiſed from them, and ſome are yet in the

To him, likewiſe, we are indebted for a plant, that will hereafter be one of the greateſt ornaments of our gardens*; as well as for many uſeful intimations, both in reſpect to his own profeſſion, as to commerce in general.

He choſe this city for his reſidence at his return to England, and ſoon had a conſiderable ſhare of employment. A vacancy happening in St. Thomas's hoſpital, about the beginning of the year 1759, he was choſen phyſician, and continued in this ſtation to the time of his death, an example of diligence and humanity to the ſick, of great medical abilities as a phyſician, and as a gentleman irreproachable. The Royal Society, of which he was many years a worthy member, the Medical Society†, likewiſe, who

gardens of a few botaniſts in the neighbourhood of London. We have not received an account of their propagation in America; but if the plant is kept alive in this country, it will probably be ſent thither under ſome perſon more attentive to the public benefit than his predeceſſors.

Dr. Ruſſell publiſhed an exact deſcription of the Scammony, and the method of collecting its juice, in the firſt volume of the Medical Obſervations.

* The *Andrachne*, nearly approaching to the *Arbutus*, which it ſurpaſſes in elegance. An exact deſcription of this plant was given in the Tranſactions, by that great botaniſt and excellent painter, the late G. D. Ehret.

† *Medical Society*. About the year 1752, ſeveral phyſicians in London, chiefly of thoſe called Licentiates, agreed to form themſelves into a ſociety, for collecting and publiſhing all ſuch obſervations and enquiries in medicine, that ſeemed to deſerve the public notice. This ſociety has ſubſiſted ever ſince, has publiſhed ſeveral volumes, which have been well received, and will be followed by others.

early

early admitted him amongſt them, are obliged to Dr. Ruſſell, and the public through them, for many valuable communications: his extenſive practice at Aleppo, his early introduction into buſineſs here after his arrival, the multitude of objects under his care in the hoſpital, ſupplied a fund of medical experience, which might have yielded much benefit to ſociety, had his life been protracted.

Need I recite how much this ſociety is indebted to his vigilance and activity? Perhaps it is in a great meaſure owing to him that it exiſts.

Conſcious of an uniform endeavour to promote the happineſs of all to the utmoſt of his abilities in every ſtation of life; accuſtomed to be treated with a degree of reſpect, which talents like his, ſo uniformly exerted in the promotion of every thing praiſe-worthy, had a right to expect; he could not eaſily brook the ſuperciliouſneſs of men, who were weak enough to ſuppoſe, that neither ſenſe nor learning, ſkill nor experience, were the produce of any other clime than that within the narrow limits of which they themſelves had been confined.

Impatient of indignities he had not deſerved, and ſatisfied that yet greater were intended to others in a like ſituation with himſelf, with a view to erect a reputation upon other-men's foundations, he communicated his ſentiments to others, who had the like apprehenſions; and common danger has happily been the means of cementing

cementing a permanent reciprocal regard, and forming a regular ſociety of men, ſcarce known to each other but by name, but whoſe views are alike, ſelf-preſervation; and whoſe talents for promoting the honour of the art they profeſs, and the benefit of their fellow-citizens, have acquired ſignal marks of royal and public approbation.

If then to him, with very few coadjutors, is owing the exiſtence of this ſociety; if the eſtabliſhment of it has contributed to ſecure no ſmall part of the faculty of phyſic in this city from injury and oppreſſion; if it ſhould be the means of eſtabliſhing the whole on a juſt and liberal foundation; if by it harmony and good intelligence have been promoted among individuals, whoſe duty and intereſt, now their inclination likewiſe, leads them to be united; our grateful acknowledgments are moſt certainly due to that man, who laboured moſt aſſiduouſly to promote theſe advantages; and to his memory let us pay a grateful tribute for his unwearied endeavours to ſerve the community, and the important ſervices he rendered it to the lateſt period of his life.

For my own part, when I recollect what I have loſt in him, the ſenſible, firm, and upright friend, the able, honeſt, and experienced phyſician, the pleaſing inſtructive companion of a ſocial hour, expreſſion fails me.

Should this Account ever paſs beyond the circle of Dr. Ruſſell's perſonal acquaintance, perhaps

perhaps it would be to them ſome gratification to know, that he was in reſpect of ſtature rather tall than middling, well made, of a freſh ſanguine complexion, grave in his deportment, chearful in converſation, active in the buſineſs of his profeſſion, and ſagacious; an attentive and diligent obſerver, clear in his intentions, manly in his preſcriptions, and in his conduct to the ſick, benevolent and diſcreet.

Animated by his example, let us purſue the arduous track of public virtue; and having, like him, ſupported the dignity of our profeſſion, by dealing with a liberal hand to all, the bleſſings of health, to the utmoſt of our abilities, and done honour to our ſpecies, by the conſtant exerciſe of uprightneſs, candour, and benignity, we may cloſe the ſcene, in full poſſeſſion of all that deſerves the name of human felicity.

THAT

THAT Dr. FOTHERGILL *had formed a decided opinion upon political matters, is well known; and those opinions he has occasionally exhibited in print, under various signatures, but never subscribed with his own name: he was more anxious to correct the judgment of others, than to display the superiority of his own. Happy would it have been for this country, had the influence of his writings been equal to their importance and sagacity: few men were better acquainted with the American Colonies, and the disposition of their inhabitants; and, foreseeing what might probably result from the prosecution of certain measures, which to him appeared ill-timed and impolitic, he published the following Considerations, so early as the year* 1765, *long before the sword was imbrued in blood; which to this day might have remained without a stain, had the knowledge and penetration of those in power been equal to his own.* Editor.

CONSIDERATIONS

CONSIDERATIONS

RELATIVE TO THE

NORTH AMERICAN COLONIES*.

THE affairs of North America are of ſo much importance to this kingdom, that I make no apology for offering a few thoughts on this ſubject to the conſideration of the public.

For whether we look at the well-being and content of near two million of Engliſh ſubjects, on that Continent, deſcended from and inſeparably connected with ourſelves; or weigh the effects which their diſcontent and unhappineſs, muſt unavoidably produce on this country, ſcarce a more important object can preſent itſelf to an Engliſhman.

The intereſts and affairs of the neighbouring kingdoms and ſtates in Europe, affect us in a very remote degree, however we may have been accuſtomed to conſider them, when compared with thoſe of our own Colonies, and the effects

* Printed in the Year 1765. *Editor.*

that

that naturally, inevitably ariſe from the loyalty and affection, or the diſguſt and ill-will of ſo large a part of our fellow-ſubjects: men, indeed, who are bound to us by *duty*, but whoſe diſtance from us would render it difficult for this kingdom to keep them always under the reſtraints of *duty*, ſhould they ever find it their *intereſt* to attempt in earneſt a diſſolution of that ſacred bond; and either concert the means of ſhaking off their dependance on us, by their own force, or court the protection of ſome other power, till they were able to unfetter themſelves from the temporary aid they had choſen to rely on, and ſtand upon their own foundation.

That this may be the caſe in ſome future period, ſhould they think themſelves hardly dealt by, may not be improbable. It therefore becomes us to foreſee, and by the moſt prudent and equitable means to prevent, the conſequences of ſuch an event; conſequences the moſt ſerious in their nature, deſtructive in their tendency to Great Britain and her Colonies, who ought to tremble even at the moſt diſtant apprehenſion of ſuch a fatal revolution.

If we enquire into the conduct of the wiſeſt ſtates to their diſtant colonies, we ſhall find it always to have been to treat them with kindneſs and indulgence, to engage them to look back to the mother country with duty and affection, and to recompenſe the protection they have enjoyed by the produce of their labours, their commerce, and, when needed, their aſſiſtance.

We meet not with many inſtances, comparatively, even of diſtant conquered countries revolting, till cauſes of ſtrong diſguſt had ſown the ſeeds of diſcontent, and ſucceeding acts of oppreſſion and injuſtice had ripened them into rebellion.

Colonies ſprung from Britain, will bear much; but it is to be remembered, that they are the ſons of freedom, and what they have been early taught to look upon as virtue in their anceſtors, will not ſoon be forgot by them. Nay, they will the ſooner be apt to vindicate their wrongs, and perhaps in an improper manner, the more ſtrongly theſe principles have been inſtilled, and the more diſtant they are from the ſource of power, and proper information.

North America, for the moſt part, ſince the time of its being diſcovered by Europeans, has received its inhabitants from Great Britain and Ireland: great numbers, indeed, have flocked from Germany, and ſome other parts of Europe, from tyranny and oppreſſion, to our Colonies, as a land of eaſe and freedom. Theſe eſteem themſelves Britiſh ſubjects, equally with the offspring of Britain: they all look upon this as their mother country, intereſt themſelves in its ſafety and happineſs, and eſteem themſelves under every obligation that ſociety admits of, to contribute to the proſperity of Britain; for in this they contribute to their own.

The late conqueſts from France, are not included in this account. The inhabitants derived

their origin from France, as the inhabitants of our own Colonies ſprung from hence. Yet of theſe, a great number are acquiring, and by a juſt and equal government will further acquire, the like ſocial regard for the intereſt of this country, as they have done for another. Time and good treatment ſtrangely metamorphoſe enemies into friends.

If then the reigning diſpoſition in our own Colonies, has always been to conſider this as their mother country; the country wherein their hopes of protection center; to which they look with gratitude and affection, and to which they chearfully bring all the produce of their labour and commerce they can ſpare, to exchange for its manufactures, an exchange which gives bread to thouſands, riches to many individuals, and vaſt ſtrength to the ſtate; if we conſider them in this point of view, and in ſuch a point they have ever been conſidered by all who knew any thing of America, till the preſent unhappy period; it admits not of a doubt, what kind of regard is due to the Americans, or what manner of treatment it is the intereſt of Britain to exerciſe towards them.

And here it may be proper to explain what was meant by aſſerting, that the affairs of our neighbours in Europe, affect us in a remote degree, compared with our Colonies. The Colonies not only bring an increaſe of revenue by their traffick, conſume vaſt quantities of our manufactures, produce, and will ſtill increaſe in producing,

ing, many raw materials; but they are ſo ſituated, their numbers ſo increaſed, their martial abilities ſo well known, as to give vaſt addition to the conſequence of Great Britain.

The maritime powers well know this; they ſee, they feel our growing influence; and that if we encourage and protect our Colonies, as we have done, the enemies of Britain have every thing to dread, its friends every thing to hope from the wiſe management of the power we poſſeſs: how eaſily are fleets or armies recruited for an American or Weſt Indian expedition, from two millions of people juſt upon the ſpot! With what expedition and ſecrecy can an armament be fitted out, of great ſtrength, from an American port, to annoy the Weſt India ſettlements, of thoſe who may ever think it their intereſt to quarrel with us! But this power may be deemed to be yet in its infancy: its growth indeed is rapid, and wiſdom is requiſite to guide its efficacy to proper ends: this power is, however, Britiſh, and will chooſe to be ſubſervient to the intereſt of the parent, if the connexion is maintained as it ought to be.

But ſhould this happy connexion be ever ſhaken, or weakened by any means; ſhould the luſt of dominion at home, or ſhould avarice baniſh the remembrance, that the Americans are ſons, and conceive a deſign to enſlave and fetter a free people, all theſe glorious proſpects vaniſh as a dream. If they prove refractory, and ſubmit unwillingly to reſtraints, which they think ſubver-

ſive of their liberties; and ſhould we aim, by force, to bring them to our terms; is not the houſe indeed divided againſt itſelf, the kingdom ſplit? and inſtead of poſſeſſing a force capable of ſupporting ourſelves and confederates, againſt all human oppoſition, and of awing into good behaviour, thoſe who envy our happineſs and good fortune, we leſſen our influence in proportion to the exertion of our ſtrength, and waſte our force in cutting the veins that ſupply vitality and vigour, and tearing off thoſe ſinews on which depend the exertions of our power.

How much better for the whole would it be, if any diſtinction is to be made, to treat thoſe diſtant ſubjects with particular indulgence; and indeed they deſerve it. For whatever the motives of their migration may have been, the effects of this migration have undoubtedly been ſignally beneficial to this country; and ſome degree of gratitude ſeems due even to thoſe who have done us a kindneſs, though without deſigning it.

When the firſt Engliſh adventurers arrived in America, the lands were of no uſe, no advantage to us. What little was added to the common ſtock, was produced by barter with the natives, and this was but an inconſiderable acquiſition. When the Engliſh began to ſettle, to clear and cultivate, then began the real acquiſition of wealth to the common national ſtock. Every acre was an addition of ſubſtantial value, as the produce, or the greateſt part of it, was deſtined

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for the mother country, in return for her produce and manufactures. From ſingle plantations, they have increaſed to colonies and provinces; governments reſpectable in themſelves, and which have done credit to their mother country in abundance of inſtances, by the wiſdom of their inſtitutions, and the virtue of their adminiſtrations. How oft have they already ſupplied their parent with important and effectual aids, both in peace and war!

Under Providence, it ſolely depends upon ourſelves, whether this power ſhall increaſe or diminiſh; whether it ſhall be for us, or againſt us. Wiſe and gentle methods will ever ſtrengthen this union, will encourage population, cultivation, commerce, whilſt the produce of all centers in Britain. Harſh and ungracious means will as neceſſarily weaken the union, will make them deſirous of forgetting that they are of Engliſh deſcent, will leſſen their duty and allegiance, and teach them to think hardly of a country, to which they indeed owe their original, but which they find diſpoſed to diſinherit them, and to deny them the privileges of their birthright. Such means will infallibly kindle jealouſies, ſpread diſcontent and diſaffection, and put a ſtop to induſtry, and to every virtuous aim or emulation.

People under ſuch circumſtances, impatiently look forward to that independency, which their ſituation favours; and this the more eagerly, in proportion to the prejudices they have early im-

bibed againſt a government they think oppreſſive; they grudge to contribute to the ſupport of a ſtate that threatens to abridge their liberties; diſcontent prompts them to enquire by what means they can moſt ſafely give vent to their revenge. They make a virtue of their neceſſities, grow frugal, either make a ſhift without, or ſupply by their own induſtry, many articles of commerce, the product of the mother country; trade then begins to languiſh at home: the merchants will firſt feel the effects of this decay, the manufacturers ſuffer next, but without knowing the cauſe. The landed intereſt then finds itſelf embarraſſed; yet how few are able to trace up the cauſe of this general diſtreſs! The remoteſt parts of this kingdom already feel, and will yet feel more dreadfully, the fatal effects of ſuch an unhappy conduct.

Far from charging the authors of theſe unhappy effects, with a deſign of *oppreſſing* the Americans, I am only recounting the effects enſuing from their conduct. That the Americans think themſelves *oppreſſed*, or deſigned to be oppreſſed, is moſt certain: witneſs the univerſal oppoſition to the late intended regulations on that continent.

Let us view what muſt happen amongſt them on this occaſion: children and youth are diſpoſed early to imbibe the language and ſentiments of their parents: they remember, during their lives, and are often ruled by, the paſſionate dictates of their forefathers. What a proſpect

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this for Britain! One ill-adviſed, unneceſſary act, has imbittered the minds of almoſt all the inhabitants of America. The youth will receive the tincture, and it is needleſs to expatiate on the effects. An age will not expunge the unhappy impreſſions:

——*Servabit odorem*
Teſta diu.

He, who by wrong meaſures, and imprudent counſels, alienates the affections of the people from their ſovereign, is the greateſt enemy to the happineſs of the king, and the proſperity of his ſubjects: and the more univerſal the diſaffection, and the more remote the ſubject from better information, the greater is the detriment. It is laying a ſure foundation for independency in the colonies, and involving both them and the parent in diſcontent and ruin.

Thouſands of manufacturers are already turned out of employ; multitudes ſoon muſt follow. The landed intereſt muſt then ſupport them, or they muſt periſh. Thus, in hopes to ſave a few pence in the pound, at the expence of America, have we ſaddled ourſelves with an additional poor's rate of ten times the amount, and ruined our commerce, till wiſer meaſures bring it back to its former channel.

Should any ambitious neighbouring power embrace the preſent juncture to revenge their paſt diſgraces, can we be ſure that the Americans

will immediately forget their animoſities againſt us, and join with their former zeal in our aſſiſtance? To act againſt us they never will, till oppreſſion, grievous oppreſſion, convinces them, that they are no longer deemed the offſpring of Britain, and have no longer to expect the inheritance of their anceſtors, Britiſh freedom, and a Britiſh king for their ſovereign.

The adminiſtration of government in America has hitherto, for the moſt part, been eaſy to the ſubject. Such of the governors ſent amongſt them, who were acquainted with men and things, held the reins with eaſe and gentleneſs; they ſaw that, for the moſt part, the early coloniſts were ſuch as inclined to republican ſentiments; they ſaw that their remote, independent, unconnected ſtate, favoured thoſe ſentiments, and that they ſubmitted to reſtraint with impatience. Indeed, if ſoils, climates, ſituations, diſpoſe mankind to peculiar habits, the genius of America ſeems to favour freedom. The aboriginal natives of the northern part of this hemiſphere, are, perhaps, the moſt free and unreſtrained of any in the known world. To unveil at once the moſt unfavourable parts of monarchy to ſuch a people, was certainly the moſt unlikely means of gaining the good opinion of ſubjects almoſt bordering on republican madneſs. To reſtrict their foreign commerce, by which they ſubſiſted; to impoſe domeſtic taxes, without their concurrence, whilſt they were overloaded with provincial debts, contracted to ſupport the Britiſh cauſe;

cauſe; to annihilate, inſtead of rectifying, their medium of commerce; to ſink them at once, in their own opinion, from the full fruition of liberty, to the loweſt ſtate of conquered countries, was too hardy a ſtep in a reaſonable adminiſtration; and thoſe who have the conduct of the helm at preſent, muſt feel the weight, the baneful influence of ſuch fatal regulations.

A Britiſh parliament has certainly *power* to do many things, which they have no *right* to do. They have *power* to enact what laws they think fit, reſpecting any part of the Britiſh ſubjects; but ſtill it is to be remembered, that reaſon is the ſupreme law, and any thing inconſiſtent with it, is void in itſelf. The diſtance of America renders it impoſſible for its inhabitants to be properly repreſented in a parliament of Great Britain. The very title of the parliament ſhews, that the Americans are yet no part of it; and conſequently to ſubject them to laws, in the making of which they have no voice, and can have none, is ſtriking at the root of our own conſtitution.

Let us look back to the diſcovery of America by Engliſh ſubjects; view their riſe, progreſs, eſtabliſhments, and connections with their mother country; and we ſhall ſoon obſerve, that thoſe who adviſed meaſures of the kind hinted at, have robbed the crown of one of its moſt eſſential privileges, and ſeem to be guilty of little leſs than high treaſon.

An adventurer diſcovers an unknown country, unpoſſeſſed

unpoſſeſſed by any potentate, with whom either law or cuſtom has eſtabliſhed any formal connections; he treats with the native inhabitants, purchaſes a tract of country from them, returns home, and applies to his ſovereign for leave to ſettle, and propoſes terms of cultivation.

A charter granting poſſeſſion, agreeable to the terms of poſſeſſing Engliſh property, and certain privileges to encourage the adventurer to ſettle in ſo remote a place, are agreed upon, and confirmed. His family, relatives, and friends, tranſport themſelves to the diſtant ſettlement; confiding in the right of his ſovereign to grant him the property, and the privileges of his birthright—laws for the good government of the ſettlers, conſonant to the laws of their native country. This confidence acquires by time the full influence of a fundamental principle, and occupies the minds of thoſe to whom it is granted, with a degree of force not eaſily to be obliterated.

They think that if the charter conſtituting theſe regulations is defective, it may ſoon become a doctrine, that their property is alſo precarious; and that every attempt to deprive the Americans of any degree of that freedom, which was at firſt granted them, unleſs ſome obvious tendency to malverſation appears, may ſoon be followed, by taking from them the property and poſſeſſion they enjoy by virtue of the ſame charter.

The Americans never ſeem to have diſputed the right of the Britiſh parliament, to regulate their

their trade and affairs, ſo as to prevent them from interfering with the advantage of the mother country. They conſider themſelves as a part of that great *whole*, over which the Britiſh parliament preſides, and in every reaſonable inſtance yield to its authority. They pay duties, impoſts, taxes laid upon their commerce agreeable to the laws of navigation. They trade to ſome places, omit trading to others; they export goods to one part of the world, and not to another, juſt as the laws eſtabliſhed for the good of the *whole* direct; and this is but their reaſonable duty.

The parliament of Great Britain has, moſt undoubtedly, a right to direct all this; and every tranſgreſſor againſt regulations, calculated for the good of the whole, and to reſtrain one part of the community from availing themſelves of any circumſtances in their ſituation that might tend to the detriment of another, is juſtly puniſhable.

But if we ſtep further, May not that right at leaſt be doubted? I am an Engliſhman, a Britiſh ſubject; the parliament has power to deprive me of any part of my property they think fit, and to ſubject me to every poſſible degree of miſery and wretchedneſs; but if I have done nothing to deſerve it, *power only* gives them no *right* to do it.

If I miſtake not, when contributions are to be raiſed in a conquered country, the vanquiſhed have always liberty to raiſe the ſum demanded,

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in what manner they think convenient. And ought our colonies to be placed in a worſe ſituation, than countries ſubdued by the force of arms? deprived of the privilege of raiſing money expected from them, for the aid of government, in the manner moſt eaſy to the individuals who muſt pay it? Nothing can afford ſtronger proofs, both of the reaſonableneſs and neceſſity of leaving this power with the colonies, wherever the right may be lodged, than the acts that have occaſioned a diſcontent through the colonies, next to madneſs, a univerſal ſtagnation of commerce, and the ruin of a multitude of induſtrious Britiſh manufacturers. A trifling inſtance will ſuffice to demonſtrate this aſſertion; to enter into a full detail of all would exceed my leiſure and abilities.

The ſtamp act directs the like duties to be paid for the public news-papers, and the advertiſements contained in them, as in England. Heretofore, as no duty was paid, an American could advertiſe the loſs of a cow, a horſe, or a hog, and ſometimes things of leſs value, at a little expence. The news-papers being cheap, came into many hands, and ſtrays, in their wilderneſs country, were often by this means recovered. But all this is now at an end. The news-papers will be dropped in many places; in others, the price of circulating intelligence will become too expenſive; and thus the poor American, who needs it moſt, has it leaſt in his power to recover his ſubſtance, through this eaſy and

effectual

effectual means. Were these duties only framed to restrain the liberty of the press in America, the operation of this law will do it effectually, and the precedent may in future times be pleaded nearer home.

It may seem to many, that charters for American governments were granted without much consideration, without regard to any thing but the petitioner's request. But this is a great mistake. It was expressly covenanted, that the adventurers should perform certain conditions on their side; in consideration of which, they were to enjoy certain benefits. With what right then can any man, or any body of men, interfere in such solemn compacts, unless sufficient cause is administered? What discouragement would hence arise to future settlements! what diminution of regal authority! an authority wisely supposed ever to subsist in the crown, for public benefit.

This way of reasoning seems just to the writer, as well as to the Americans in general who live under these grants, and who little suspect that the tenure of their property, the enjoyment of their liberties, the possession of every thing they esteem valuable, is entirely at the mercy of men totally ignorant of their condition and abilities; nay, many of whom may justly be supposed, from what has happened, to be altogether ignorant that they are the descendants of Englishmen, claim the like privileges, and look up to the same royal sovereign for protection.

Canada,

Canada, and its dependencies, a vaſt country, ſuperior in extent, equal in number of inhabitants to ſome ancient empires, that make no contemptible figure in hiſtory, is a conquered country; it belonged to the French, was a thorn in our ſides, and was at length wreſted from them, by great military virtue, and the permiſſion of Providence. Conditions of ſurrender were ſtipulated, and theſe ſtipulations are to be the baſis of all regulations in that country. If no expreſs agreement was made, that they ſhould enjoy the Britiſh privilege of having no monies raiſed upon them, but by the conſent of their repreſentatives, the Britiſh parliament have a *right*, as well as *power*, to make what aſſeſſments upon it they think fit. But it is apprehended, that the caſe of our colonies ſprung from ourſelves, and living under charters expreſsly granting them particular exemptions, is very different. Otherwiſe there would be no advantage to have been born the ſubjects of Great Britain, ſince they muſt yield to the ſame harſh terms which men ſubjected by the ſword, have been ſubjected to; be governed by laws, and their property diſpoſed of by regulations, in the making of which they have no voice, can give no diſſent.

The public prints inform us ſufficiently of the diſquietude which theſe imprudent meaſures have produced: the adminiſtration, doubtleſs, have yet more perplexing accounts; riots, tumults, and every ſpecies of anarchy, that people, mad with the proſpect of oppreſſion, can exemplify.

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What can be done under ſuch circumſtances? To reverſe theſe fatal acts and regulations, may ſeem to encourage a licentious rabble to oppoſe every act of power, however conducive to the public good, if it ſquared not with popular opinion. To perſevere in a reſolution, to ſubject ſuch untractable ſpirits, even by force, if it was neceſſary, would be next to diſtraction. Our wiſe neighbours already ſee this, and riſe in their demands, increaſe in their obſtinate refuſal to our claims, in proportion to the proſpect of this diſunion. A dangerous precedent on one hand, as ſome may think, to reverſe without trial an act of the ſupreme legiſlature: on the other a ruinous civil diſcord. Theſe are among the unfortunate legacies to the preſent adminiſtration.

It may perhaps be replied, that the Americans ought to be reduced to reaſon by any means, rather than the ſupreme authority of a Britiſh legiſlature ſhould be treated with oppoſition or contempt: that they ought to have remonſtrated againſt grievances when felt, and not to revolt againſt government, for imaginary evils. All this is granted. But let us for a moment place ourſelves in their ſituation.

Many of theſe people fled from tyranny and oppreſſion, and took all the care they could, in the charters they obtained, to have as much freedom, as the genius of our conſtitution could allow.

The ſons have been taught to eſteem theſe privileges as the moſt ſacred depoſit, and in

defence of which they ought to riſque every thing.

When the reſolutions of parliament were ſent over to America, and the inhabitants found the privileges which they deemed moſt ſacred, were to be aboliſhed for ever; what could be expected from perſons bred up almoſt in independency, and full of republican ſentiments? They were ſtruck with the deepeſt aſtoniſhment; they attempted to remonſtrate—ſome with as much temper as could be expected from people in this ſituation; others, with ſuch evident tokens of reſentment, as plainly indicated that reaſon had for the time forſook them.

But when they were informed by their agents, that their remonſtrances could not be heard; that the meaſure was finally reſolved on, without their being allowed to explain themſelves in any manner; and that they had no part left, but to ſubmit; the rage of the populace broke all bounds, and they have proceeded to ſuch lengths, as their warmeſt advocates can by no means juſtify.

Let it likewiſe be remembered, that when the ſtamp duty was laid upon this nation, it was only one quarter part of the preſent. It has riſen by degrees to what it is, as the riches of the country could bear it.

America was by no means ſo rich as England, when this duty commenced; yet the people are taxed not only as high as the Engliſh, but as much higher, as a ſhilling is more valuable in America than in England, which in ſome provinces,

vinces, I apprehend, is a third, if not one half more; that is, a ſhilling ſterling in England is equal to 1s. 6d. or 2s. in the colonies. So that at one ſtep, not only a tax is laid upon them without their conſent; but, conſidering their poverty compared with England, and the difference of exchange, the load is heavier than this country would ever ſubmit to. A convincing proof, how neceſſary it is that all internal taxes ſhould every where be raiſed, only by the repreſentatives of thoſe who pay them!

It has been alleged, and moſt weakly alleged, that the Americans are repreſented, as much copyholders, as many large towns and populous communities in this kingdom. It is amazing how ſuch an opinion could poſſeſs the mind of any man of reflection. There is not a man in this kingdom, be his condition ever ſo low in life, who may not be ſaid to have an influence in the choice of our repreſentatives, though not worth a ſingle ſhilling. He can at leaſt make part of the mob, and huzza for the man he likes. But if he has property, his influence riſes in proportion. There are people in this capital, who are neither freemen, nor freeholders, yet have it in their power greatly to affect the choice of repreſentatives in this city, as well as in many parts of the nation. Can an American do this? How vain was the ſophiſtry! how flimſy the deception! What an affront to the underſtandings of ſenſible people!

It has been propoſed by ſome, that the colonies ought to be repreſented in the Britiſh ſenate, by members choſe by the Americans. This indeed proves, that they are not yet repreſented there, in the opinion of thoſe who make the propoſition, and this is ſome palliation to the preſent extravagancies: but the writer thinks they never ſhould be; and that it is the mutual intereſt of the colonies, and Great Britain, that no deputies from North America ſhould ever have a ſeat in the Britiſh ſenate.

Can they ſend any deputies, who will at no time give up their own, or the Britiſh liberties, for a place or a penſion? The more diſtant they are from their conſtituents, the more they are expoſed to temptation. The leſs property theſe deputies have, the leſs will be the purchaſe of their votes. Will Americans, who are able to ſerve their country, and of independent fortunes, be at all times willing to riſque their lives acroſs the ocean in this ſervice? Will the diſtance admit them to conſult their conſtituents, during the ſeſſions? Muſt we have an auxiliary army of American penſioners, in conjunction with ſome other diſtant members, not leſs purchaſeable, to bear down the ſons of freedom and independence in the Britiſh ſenate, when perhaps the whole fortune of liberty is at ſtake? No. We ſee enough of the effects of venal poverty at home, without adding to its influence from our colonies.

In forming our opinions of the degree of ſubjection to be expected from the Americans, we ſhould place ourſelves in their ſituation, and conſult reaſon, the laws of nature and nations. To form our ideas of this point, from precedents to be found in Engliſh hiſtory, is vain. England never had a like precedent. When Magna Charta was firſt eſtabliſhed, where were her colonies? When the people uſed to meet themſelves, to tranſact their own buſineſs, but found it neceſſary to chuſe repreſentatives in parliament, what was America? The wiſdom of thoſe who firſt granted charters of colonization, ſaw the impoſſibility of the colonies being repreſented in the Britiſh legiſlature, by any other than the king's perſon, who, as a part of the legiſlature, was liable to have his adviſers called to account, if the Britiſh ſubjects whom he therein repreſented, were not governed as they ought to be.

A governor, the king's repreſentative, reſides in every province. No laws can be paſſed without his conſent; nor are theſe laws valid till they have received the royal approbation at home. Thus the allegiance of the Americans is at once ſecured to the mother country, and care is taken that no act ſhall be paſſed in any one government, that ſhall be detrimental to another, to the whole, or to Great Britain, by forming any legal confederacy amongſt themſelves to her diſadvantage.

It is well known, that the powers of the king's repreſentatives are ſuch, that if any colony proves

refractory to the juſt deſires of the crown, there are many legal expedients by which a governor can awake the people to reaſon.

Suppoſe the king's miniſters had adviſed him to inſtruct the American governors, that a ſtamp act would be uſeful to the reſpective governments, and to apply to their ſeveral houſes of repreſentatives on this occaſion, laying before each the general plan upon which they were to proceed. Would this have been refuſed? Moſt probably not. They would have ſeen their own ſecurity, and the good of the ſtate, united in a ſtamp act, conducted by perſons acquainted with the ſtate of the country, and ability of its inhabitants; which, permit me to ſay, are not ſo generally, ſo fully underſtood in this country, as is neceſſary for our own ſake, as well as theirs: this I aſſert not at random, or mere conjecture, but from daily obſervation and experience. Should America in proceſs of time become the greater country, and the reſidence of a monarch of its own; ſhould a parliament there be formed of repreſentatives wholly Americans; ſhould this legiſlature take upon them to tax Great Britain, and have the power in their hands to compel its ſubmiſſion, or to reduce it to extreme diſtreſs, how would this country like ſuch treatment? They would pay obedience no longer than they could help it; would think of the Americans, preciſely as they think of us; that we at ſuch a diſtance muſt be wholly unacquainted with their real ſtate; that the acts made concerning them

gave

gave evident proofs of it; and that it would become them either to ſtand by themſelves, or look out for leſs rigorous maſters.

I am not ignorant that endeavours are uſed, to prompt thoſe who are to decide on theſe important affairs, to exert what they call *authority*, and to *enforce* the acts that have given ſuch univerſal diſcontent through America, and opened a proſpect of ruin to thouſands in this country, who deſerve a better fate.

Let us trace the effects of this counſel. The Americans, they ſay, will ſoon ſubmit to this, and every other act the Britiſh parliament think fit to preſcribe. But are they ſure this will be the reſult? Admit however that theſe gentlemen are in the right, that the Americans quietly ſubmit to parliamentary authority; yet they muſt likewiſe admit, that the Americans in general are diſguſted with a law, that deprives them of what they plainly tell us they think their birthright. Whether they think right or wrong, is nothing to the argument; it is enough that this perſuaſion is general: force may prevail upon them to act againſt their perſuaſion; but will it follow that force will change their opinion? By no means: *rigour*, and *enforcing*, may poſſibly oblige them to ſubmit, till it is in their power to emancipate themſelves, not from internal taxes only, but from all foreign juriſdiction; and this event will undoubtedly approach the faſter, as the means employed to force them to obedience are more diſguſtful and compulſory.

How much more advantageous would it be to this nation, could the legiſlature unite in this ſingle conſideration: By what means Great Britain can moſt effectually render it the intereſt and inclination of her colonies, to continue not only dependent upon, but inviolably attached to her.

It is hard to gain a diſpaſſionate hearing, againſt prejudices that flatter at once our vanity and our avarice. If the ſtamp act is repealed, we encourage the Americans to ſhake off all dependence: this is the general language, I own, and am ſorry for our own ſakes that it is ſo, becauſe it betrays our vanity and ſelfiſhneſs. The moſt ſanguine abettors of *enforcing* cannot vindicate the act itſelf, nor urge one plea for its neceſſity; at leaſt I have neither ſeen nor heard any reaſonable arguments on this head. If then an act has been paſſed by the Britiſh legiſlature, that carries evident tokens of impropriety, would it not be more prudent to reſcind ſuch an act, and to convince the Americans, that they will ever meet with juſtice in the Britiſh ſenate, ſhould they at any time be in danger of oppreſſion by imprudent conduct; rather than perſiſt in a miſtake, becauſe it has once been adopted, and hold out to them an example of injudicious adherence to errors once committed? What ſhould we think of ſuch a conduct in private life? Yet juſtice, equity, moderation, and good ſenſe, are the ſame, whether they relate to the concerns of private men, or of ſtates and empires.

In reflecting on this ſubject, one cannot but regret,

regret, that the geography and hiſtory of our colonies is ſo little attended to. It is not among the vulgar only, that we meet with perſons who are totally unacquainted with the ſituation, produce, inhabitants, their condition, manner of life, their traffic and connections.

And this is the more inexcuſable, as there are not wanting many uſeful Treatiſes upon theſe ſubjects; and were the public, or that part of the public which ought to be inquiſitive after proper information, (as liable to become a part of the Britiſh ſenate, and empowered by the Britiſh people, the grand ſource of power, to decide on queſtions of the utmoſt importance to America;) I ſay, was this part of the public ſolicitous after information, in reſpect to theſe important objects, numerous occaſions of it would daily preſent themſelves.

How many people are there, and thoſe too of no ſmall figure, who know no difference between the inhabitants of North America, and thoſe of the Weſt India iſlands! They form their ideas of all, by the manner and appearance of a few, who have no reſemblance to them in manners, way of life, or fortune. The Britiſh inhabitants of North America are of two ſorts; thoſe who live in the northern part of the continent, and thoſe who inhabit the ſouthern. Nova Scotia, New England and its dependencies, New York, the Jerſeys and Penſylvania, belong to the former diviſion: Maryland may be divided between both; Virginia, the Carolinas and Georgia, are

the other part. Of the late ſouthern or northern acquiſitions I ſay nothing, as they are yet very light in the ſcale of power. The inhabitants of the northern part live like our lower Engliſh farmers; they plough, ſow, reap, and vend different kinds of grain, as the land they occupy and the climate permit—maize, wheat, barley, oats, peaſe, and the like rural produce. They raiſe cattle, hogs, and other domeſtic animals, for uſe and ſale; alſo hemp, flax, naval ſtores, but yet in ſmall quantities. Their ſummers are hot, their winters ſevere, and their lives are paſſed with the like labour and toil, and with the ſame impoſſibilities of acquiring more than is ſufficient to maintain their families juſt above want, as the little farmers in England.

This they have in their favour: as land is for the moſt part cheap (a moſt certain ſign of poverty) the young people can marry without much riſque of maintaining themſelves and their offſpring. The parents can give a few cows, ſwine, and perhaps a few moveables, and help them to build a log houſe. Here the young couple ſit down contented—they labour as their parents have done, are content with hard fare and mean cloathing. If they get enough to ſupport them, they are ſatisfied; and if they can afford to have an Engliſh utenſil, or Engliſh cloathing, they are rich. Here and there one applies to commerce, and ſettles in the next town, as in England. Fortune, aided by capacity and induſtry, raiſes him above the level, and he acquires the

reputation

reputation of a conſiderable merchant, on a capital that would not furniſh a chandler's ſhop in London. He is, however, a moſt uſeful member of ſociety; he imports all the Britiſh manufactures he can, and vends them amongſt his compatriots. The grower of the product, ſuppoſe it wool; the manufacturers, for there are many; the Engliſh merchant, the navigators, the American merchant; all are gainers by a poor wilderneſs American, the conſumer. What a pleaſing proſpect for Britain, who will every day more ſenſibly feel the advantages of this commerce, unleſs by —— ſhall I call it their Evil Genius?—they are goaded on, to accelerate their own undoing, by oppreſſing the Americans!

Such is the way of life of the North Americans of the northern diſtrict. The inhabitants of the ſouthern approach nearer to the Weſt Indians. The land is capable of producing riches of another nature; tobacco, which has been the pleaſing intoxication of many nations, is produced in Maryland and Virginia, chiefly by the labour of negroes. Rice is the product of the Carolinas; a happy ſuccedaneum for bread; the proper, the moſt ſuitable ſupport of hot countries: this likewiſe is raiſed, cultivated, dreſſed by the labour of negroes.

The wiſdom of Providence is every where conſpicuous to the attentive obſerver; and perhaps in nothing more, than in the different degrees of fertility of the different parts of the globe, moſt wiſely adjuſted to the neceſſities of the

the reſpective inhabitants. In the colder regions, the earth produces its ſtores with difficulty; ſtrength and labour here are requiſite to unlock the little treaſure that the earth contains: but the bracing cold, the whetted appetite, the ſtrong powers of digeſtion, derived from cold and penury, render labour eaſy, and the conſequences pleaſureable. Thus the dreary waſtes of Siberia, the mountainous Alps, the bleak Highlands, the Cumbrian hills, the Yorkſhire woulds, and Welch mountains, breed as hardy, as contented, and as uſeful a ſet of mortals, as the univerſe produces.

A few acres in Barbadoes, or others of the Weſt India iſlands, properly cultivated, yield a crop, in value ſuperior, perhaps, to one hundred times the extent, either in North America or in England; and it is juſt that they ſhould do ſo. In theſe hot climates, if the Author of Nature had not diſpenſed the means of ſubſiſtence with a more liberal hand than in the northern regions, who could have ſubſiſted there?

Were the poſſeſſors of lands in theſe hot countries obliged to labour for themſelves, we ſhould not ſee the many inſtances we do of idleneſs and extravagance: but the ſlave trade enables the inhabitants of theſe warmer regions, to procure, not only the neceſſaries and conveniencies of life, but vaſt wealth, at the expence of people, who, born under a hotter ſun, are found able to bear labour equal almoſt to a native of the north, in his own country, and compelled to work by ſore and grievous ſtripes; men in all things like ourſelves,

ourſelves, colour and ſome circumſtances of form excepted, torn from the tendereſt ties of nature by violence and fraud, to drudge in ſervitude during the reſidue of their days, without hope of redemption!

The wealth accruing from the ſweat of theſe poor wretches, who ſooner or later may be permitted to become the dreadful executioners of ſlow-paced vengeance, has unhappily fixed in the minds of many here, an idea that the Weſt Indians, and North Americans, are in the like ſituation, in reſpect to the means of acquiring riches, and poſſeſſing them; a miſtake which an attentive conſideration of the premiſes may perhaps contribute to remove.

For as the northern people of America truſt to their own induſtry, ſo the ſouthern inhabitants are rich in proportion to the number of ſlaves they poſſeſs. In the former, all are low and middling people, the ſure ſupport of any country; none are great or rich. In the latter, there are few middling people; a very few are conſiderable; the reſt are below the middle claſs in general.

The conduct of theſe people, I mean the inhabitants of the ſouthern diſtrict, when they arrive in England, approaches nearer to ſhew and extravagance, than the northern inhabitants; and has added to the general miſtake in this country, that the Americans are rich. The conduct of the Weſt Indians has perfected this idea. Bred for the moſt part at the breaſt of a negro ſlave, ſurrounded in their infancy with a numerous retinue

tinue of dark attendants, they are habituated, by precept and example, to ſenſuality, ſelfiſhneſs, and deſpotiſm. Of thoſe ſent over to this country for their education, few totally emerge from their firſt habitudes: view them as ſons, huſbands, fathers; as friends, citizens, and men; what examples! Splendor, dreſs, ſhew, equipage, every thing that can create an opinion of their importance, is exerted to the utmoſt of their credit. They are thought rich; and they are ſo indeed, at the expence of the poor negroes who cultivate their lands, could they be contented with mediocrity.

If people of quality and condition would ſtudy the geography and ſtate of our colonies; would they give themſelves the trouble of diſtinguiſhing their different ſituations; it would prevent them from confounding together circumſtances extremely oppoſite; from inferring, that becauſe an opulent Weſt Indian vies in glare with a nobleman of the firſt diſtinction, therefore a poor American farmer is able to bear the ſame heavy load of taxes, or ought to be placed in the ſame ſcale of ability.

In a word, the inhabitants of the Weſt India iſlands are in general the reverſe of the northern North Americans: whilſt theſe are poor, laborious, contented with a little, examples of diligence and frugality, the beſt riches of a ſtate—the Weſt Indians are too often the reverſe. Much indeed is to be allowed for the different climates. Heat enervates, it creates ſenſuality, and urges to contrive every means of gratification.

Another

Another circumſtance has likewiſe contributed not a little to eſtabliſh an idea of the riches of North America; which is, the known hoſpitality of theſe people in general to all Britiſh ſtrangers. Vying with each other who ſhall afford their gueſt the moſt hoſpitable entertainment, they have unfortunately rivetted an opinion in travellers, that they are rich, only becauſe they are generous to exceſs.

But leaving this ample field to others, who have more leiſure, and greater abilities, I ſhall here remark, that there are too few, who have hearts ſufficiently dilated to conceive, that a conduct founded on noble, generous, upright principles, is the glory of man, and invariably procures him every bleſſing compatible with his ſituation. A fact of ſufficient authenticity will perhaps illuſtrate this aſſertion, and at the ſame time point out the mark we ſhould aim at in the preſent intereſting ſituation of our affairs:

When the Roman army was ſhut up in the Caudine forks, the wiſe Samnite, with a thorough ſenſe of this principle, adviſed his ſon to permit the Romans, without injury, to retreat from the danger in which they ſaw themſelves irretrievably involved.

This diſpleaſed the haughty general and his army; the wiſe old man then adviſed the total deſtruction of the Roman army.

Neither of theſe alternatives were purſued: ſelfiſhneſs and pride preſented a middle way, that ended in the deſtruction of the nation. The Samnite leader, flushed with the ſucceſs of his

machinations, determined to enjoy the pleaſure of a triumph. He gave the Romans their lives, at the expence of their honour. The inſult was too great for the Roman people to forgive; they vowed revenge, and hoped, though vainly, to blot out the remembrance of their diſgrace and perfidy, by the extirpation of the Samnite people; which, contrary to juſtice and humanity, they effected.

Let us profit by this leſſon; the caſes, I own, are not parallel, but yet the moral may be of uſe to us. Three ways are propoſed to extricate ourſelves from the preſent perplexities. The firſt, to enforce the ſtamp act; the ſecond to ſuſpend, and the third to repeal it.

The firſt ſeems like the Samnites opinion, to deſtroy the Roman army totally, then in their power. The Americans, moſt probably, will not give up their claims without bloodſhed; and whoever ſuffers, the king by that loſes a ſubject, and the affections likewiſe of many more.

To ſuſpend the act, ſeems to be holding a yoke of diſgrace over them, which, though they may bear at preſent without marks of impatience, will only prompt them to make the quicker ſtrides to abſolute independency.

A repeal of the ſtamp act, will convince the Americans ſo fully of our equity and moderation, that they will no longer ſuſpect us of deſigns againſt their freedom, their privileges, or their intereſts. They will be ſure of redreſs, if grievances ariſe; and will bear them patiently, till they can be heard.

Remember,

Remember, my countrymen, that the Americans are not a conquered, but a free people, descended from freeborn Englishmen for the most part; and those who are of another progeny, have acquired the like sentiments, by proximity and acquaintance. They are people of the like passions with ourselves, and look upon oppressive power with the same spirit of intolerance; while their generosity and affection to those who treat them kindly, is, like the region they inhabit, vast, and whose limits are hitherto unknown.

The wisdom of parliament may nevertheless, in time, discover such means of perfect and stable connection with the colonies, as may secure a just authority over them, and at the same time preserve inviolable the privileges and immunities, purchased by our brethren in America, at the expence of cultivating a wilderness for our advantage.

And indeed, by the prudent policy of those who planned or granted the several charters, the task of securing the dependence of the colonies, is rendered much less difficult to government, than it might have been, had the charters been uniform. But by granting distinct privileges and establishments to the several provinces, each has acquired an opinion, that its own is the most perfect, and would not willingly exchange its condition, or communicate its *peculiar*, with any other colony. Thus they are, and must long remain, not only *unconnected*, but in some cases *opposites*, till the prospect of some common danger appears, and forces them to unite in their

common defence, and build up a potent and formidable confederacy.

If we permit the Americans to trade as they have done; if we permit them to raiſe every kind of raw materials, of which we have need, either for uſe or commerce; if we render it their intereſt, by ſuch means, to be dependent upon us, they will be ſo continually.

If we promote ſcholarſhips for Americans in our univerſities; give poſts and benefits in America, to ſuch Americans who have ſtudied here, preferably to others; if the government permits ſuch youth as come to Europe, on account of their ſtudies, to come over in the king's ſhips *gratis*, we ſhall ſtill unite them more firmly. The Americans, by mixing with our own youth at the univerſity, will diffuſe a ſpirit of enquiry after America, and its affairs; they will cement friendſhips on both ſides, which will be of more laſting benefit to both countries, than all the armies that Britain can ſend thither.

If ſuch be the conduct of this nation towards her colonies, ſhe will ever poſſeſs their affections; the product of their labours will center here; their power will be ſubſervient to our command; and a force will be generated, Providence permitting, ſuperior to what any country now poſſeſſes.

END OF THE SECOND VOLUME.